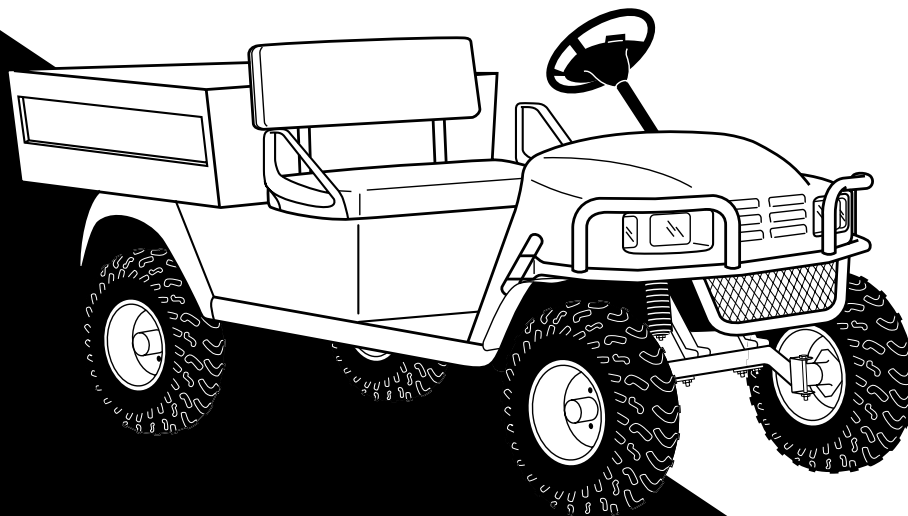


TEXTRON

GOLF, TURF & SPECIALTY PRODUCTS



EZGO ST SERIES
WorkHorse

OWNER'S MANUAL & SERVICE GUIDE

Starting Model Year 2003

MANUAL INFORMATION

For any questions on material contained in this manual, contact a representative for clarification.

Read and understand all labels located on the vehicle. Always replace any damaged or missing labels.

On steep hills it is possible for vehicles to coast at greater than normal speeds encountered on a flat surface. To prevent loss of vehicle control and possible serious injury, speeds should be limited to no more than the maximum speed on level ground. (See vehicle specification.) Limit speed by applying the service brake.

Catastrophic damage to the drive train components due to excessive speed may result from driving the vehicle above specified speed. Damage caused by excessive speed may cause a loss of vehicle control, is costly, is considered abuse and will not be covered under warranty.

Be sure that this manual remains as part of the permanent service record should the vehicle be re-sold.

Throughout this guide, **NOTE**, **CAUTION** and **WARNING** will be used.

NOTE

A **NOTE** indicates a condition that should be observed.

CAUTION

A **CAUTION** indicates a condition that may result in damage to the vehicle.

! WARNING !

A **WARNING** indicates a hazardous condition which could result in severe injury or death.

Please observe these notes, cautions, and warnings; be aware that servicing a vehicle requires mechanical skill and a regard for conditions that could be hazardous. Improper service or repair may damage the vehicle or render it unsafe.

! WARNING !

Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.

NOTE

The exhaust emissions of this vehicles' engine complies with regulations set forth by the Environmental Protection Agency (EPA) of the United States of America (USA) at time of manufacture. Significant fines could result from modifications or tampering with the engine, fuel, ignition or air intake systems.

! WARNING !

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

NOTE

This spark ignition system meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Ce système d'allumage par étincelle de véhicule respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

OWNER'S MANUAL & SERVICE GUIDE

ST 350

ST SPORT

Textron Golf, Turf & Specialty Products reserves the right to make design changes without obligation to make these changes on units previously sold and the information contained in this manual is subject to change without notice.

Textron Golf, Turf & Specialty Products is not liable for errors in this manual or for incidental or consequential damage that result from the use of material in this manual.

CUSTOMER SERVICE DEPARTMENT IN USA PHONE: 1-800-241-5855 FAX: 1-800-448-8124

OUTSIDE USA PHONE: 010-1-706-798-4311 FAX: 010-1-706-771-4609

TEXTRON GOLF, TURF & SPECIALTY PRODUCTS, P.O. BOX 388 AUGUSTA, GEORGIA 30903-0388 USA

To obtain a copy of the limited warranty applicable to the vehicle, call or write a local Distributor, authorized Branch or the Warranty Department with vehicle serial number and manufacture date code.

The use of non Original Equipment Manufacturer (OEM) approved parts may void the warranty.

Tampering with or adjusting the governor to permit vehicle to operate at above factory specifications will void the vehicle warranty.

When servicing engines, all adjustments and replacement components must be per original vehicle specifications in order to maintain the United States of America Federal and State emission certification applicable at the time of manufacture.

BATTERY PROLONGED STORAGE

All batteries will self discharge over time. The rate of self discharge varies depending on the ambient temperature and the age and condition of the battery.

A fully charged battery will not freeze in winter temperatures unless the temperature falls below -75° F (-60° C).

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SAFETY INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

The Owner's Manual and Service Guide has been designed to assist in maintaining the vehicle in accordance with procedures developed by the manufacturer. Adherence to these procedures and troubleshooting tips will ensure the best possible service from the product. To reduce the chance of personal injury or property damage, the following must be carefully observed:

GENERAL

Many vehicles are used for a variety of tasks beyond the original intended use of the vehicle; therefore, it is impossible to anticipate and warn against every possible combination of circumstances that may occur.

Good common sense and prudent driving practices do more to prevent accidents and injury than all of the warnings and instructions combined. The manufacturer strongly suggests that all users and maintenance personnel read this entire manual paying particular attention to the CAUTIONS and WARNINGS contained therein. If you have any questions, contact your closest representative or write to the address on the back cover of this publication, Attention: Product Service Department.

- Textron Golf, Turf & Specialty Products is not liable for errors in this manual or for incidental or consequential damages that result from the use of the material in this manual.
- Textron Golf, Turf & Specialty Products reserves the right to make design changes without obligation to make these changes on units previously sold and the information contained in this manual is subject to change without notice.
- This vehicle conforms to the current applicable standard for safety and performance requirements.
- These vehicles are designed and manufactured for off-road use. They do not conform to Federal Motor Vehicle Safety Standards of the United States of America (USA) and are not equipped for operation on public streets. Some communities may permit these vehicles to be operated on

- their streets on a limited basis and in accordance with local ordinances.
- Vehicle capacity is limited to a maximum of two persons.
- Never modify the vehicle in any way that will alter the weight distribution of the vehicle, decrease its stability or increase the speed beyond the factory specification. Such modifications can cause serious personal injury or death. Modifications that increase the speed and/or weight of the vehicle will extend the stopping distance and may reduce the stability of the vehicle. Do not make any such modifications or changes. The manufacturer prohibits and disclaims responsibility for any such modifications or any other alteration which would adversely affect the safety of the vehicle.

GENERAL OPERATION

The following information is very important in the operation of the vehicle. The operator should read, understand and **always** observe the following:

- Use the vehicle in a responsible manner and maintain the vehicle in safe operating condition.
- Read, understand and observe all warnings and operation instruction labels affixed to the vehicle.
- Follow all safety rules established in the area where the vehicle is being operated.
- Reduce speed to compensate for unsuitable terrain or conditions.
- Apply service brake to control speed on steep grades.
- Reduce speed in wet areas.
- Use extreme caution and reduced speed when approaching sharp or blind turns.
- Use extreme caution and reduced speed when driving over loose terrain.
- Use extreme caution and reduced speed in areas where pedestrians are present.

SAFETY INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

MAINTENANCE

The following information is very important in the maintenance of the vehicle. The person performing maintenance procedures should read, understand and **always** observe the following:

- Maintain your vehicle in accordance with the manufacturer's periodic service schedule.
- Ensure that mechanics performing repairs are trained and qualified to do so.
- Follow the manufacturer's directions if you perform maintenance on your own vehicle. Be sure to disable the vehicle before performing any maintenance. Disabling includes removing the key from the key switch and removal of a battery wire.
- Insulate any tools used within the battery area in order to prevent sparks or battery explosion caused by shorting the battery terminals or associated wiring. Remove the battery or cover exposed terminals with an insulating material.
- Check the polarity of each battery terminal and be sure to rewire the battery correctly.
- Use specified replacement parts. Never use replacement parts of lesser quality.
- Use only tools recommended by the manufacturer.
- Determine that tools and procedures not specifically recommended by the manufacturer will not compromise the safety of personnel nor jeopardize the safe operation of the vehicle.
- Support the vehicle using wheel chocks and jack stands. Never get under a vehicle that is supported by a jack. Lift the vehicle in accordance with the manufacturer's instructions.
- Never attempt to perform vehicle maintenance in an area where exposed flame is present or persons are smoking.

- Be aware that a vehicle that is not performing as designed is a potential hazard and must not be operated until inspected and repaired.
- The manufacturer cannot anticipate all dangerous situations. People attempting to maintain or repair the vehicle must have the skill and experience to recognize and protect themselves from potential dangerous situations. These situations could result in severe personal injury or death and damage to the vehicle. Use extreme caution and if unsure as to the potential for injury refer the repair or maintenance to a qualified mechanic.
- Test drive the vehicle after any repairs are made or maintenance procedures performed to assure the vehicle is safe to return to service. All tests must be conducted in a safe area that is free of both vehicular and pedestrian traffic.
- Replace damaged or missing warning, caution or information labels.
- Keep complete records of the maintenance history of the vehicle.

VENTILATION

- Always store gasoline vehicles in a well ventilated area to prevent gasoline fumes from accumulating.
- Never fuel a vehicle in an area that is subject to flame or spark. Pay particular attention to natural gas or propane water heaters and furnaces.
- Never work around or operate a vehicle in an environment that does not ventilate exhaust gases from the area. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings



Thank you for purchasing a light duty utility vehicle. Before driving the vehicle, we ask you to spend some time reading this Owner's Manual and Service Guide. This guide contains the information that will assist you in maintaining this highly reliable vehicle. Some illustrations may show items that are optional for your vehicle. This guide covers the operation of several vehicles; therefore, some pictorial views may not represent your vehicle. Physical differences in controls will be illustrated.

This vehicle has been designed and manufactured as a 'World Vehicle'. Some countries have individual requirements to comply with their specifications; therefore, some sections may not apply in your country.

Most of the service procedures in this guide can be accomplished using common automotive hand tools. Contact your service representative on servicing the vehicle in accordance with the Periodic Service Schedule.

Service Parts Manuals and Technician's Repair and Service Manuals are available from a local Distributor, an authorized Branch or the Service Parts Department. When ordering parts or requesting information for your vehicle, provide vehicle model, serial number and manufacture date code.

BEFORE INITIAL USE

Read, understand and follow the safety label on the instrument panel (Ref Appendix A). Be sure you understand how to operate the vehicle, its equipment and how to use it safely. Maintaining good performance depends to a large extent on the operator.



Improper use of this vehicle could result in severe injury or death. The ST Series vehicle is a light duty utility vehicle. It is NOT an all terrain vehicle (ATV).

This vehicle is not a toy and using it while engaging in horse-play is dangerous.

Plan carefully before using the vehicle to go significant distances over questionable terrain. Remember that a one hour drive may take many hours to walk out should you run out of fuel or be stranded by becoming stuck on unsuitable terrain.

Hydrogen gas is generated as a natural part of the lead acid battery charging process. A 4% concentration of hydrogen gas is explosive and could cause severe injury or death. Charging must take place in an area that is adequately ventilated (minimum of 5 air exchanges per hour).

To reduce the chance of battery explosion that could result in severe injury or death, never smoke around or charge batteries in an area that has open flame or electrical equipment that could cause an electrical arc.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

Before a new vehicle is put into operation, the items shown in the INITIAL SERVICE CHART must be performed (Ref Fig. 1 on page 3-2).

Vehicle battery must be fully charged before initial use.

Check for correct tire inflation. See GENERAL SPECIFICATIONS.

Check for oil or fuel leaks that could have developed in shipment from the factory.

Determine and record braking distance required to stop vehicle for future brake performance tests.

Remove the protective clear plastic, that protect the seat bottom and back rest during shipping, before placing the vehicle in service.

ITEM	SERVICE OPERATION
Battery	Charge battery
Seats	Remove protective plastic covering
Brakes	Check operation and adjust if necessary
	Establish acceptable stopping distance
Tires	Check air pressure (see SPECIFICATIONS)
Fuel	Fill tank with correct fuel
Engine	Check oil level

Fig. 1 Initial Service Chart

TERRAIN

The vehicle is designed for use on improved roads (but not on public highways). The vehicle may also be used on established trails or open terrain that is free from stumps, large rocks or holes.

The vehicle should not be used to cross water.

VEHICLE CAPACITY



Due to the variety of ways the vehicle may be used, it is important that the operator consider any potential hazards before use to prevent serious injury or death.

The vehicle may be used to transport a **maximum of two people within the operator/passenger compartment** and cargo in the load bed. **Never carry passengers in the load bed.** The total payload of the ST 350 is 800 lbs. (363 kg) and the ST SPORT is 650 lbs. (295 kg). The weight of the driver and passenger plus any options or accessories must be deducted from the total payload rating to determine the load bed capacity. Remember that towing a trailer will reduce the payload of the vehicle itself.

Remember that volume of your load can be misleading. Loading the vehicle to its rated capacity with dry sand, fertilizer, sod, etc. can be handled with complete safety. The same load when wet will grossly overload the vehicle and increase the potential for roll over and damage to the vehicle.

MODIFICATIONS TO VEHICLE



Changes to the weight distribution or the center of gravity may make it unstable or prone to roll over which could result in injury or death to the operator or passenger.

Do not modify the vehicle in any manner that will change the weight distribution of the vehicle. Changes to the weight distribution or the center of gravity may make it unstable or prone to roll over which could result in injury or death to the operator or passenger.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

COMMON SENSE OPERATION

This vehicle is not a toy. If not operated properly and responsibly, it can cause severe injury or death to the operator, passenger or bystanders. All operators should possess a valid driver's license. Children should not be permitted to operate the vehicle. Children may not have the skill, judgement or strength to operate this or similar vehicles.

Alcohol, drugs and many over the counter medications reduce the ability of the driver to operate the vehicle safely. Always review side effects of any medication with a doctor or pharmacist before operating vehicle.

Protective clothing and an approved motorcycle helmet are recommended for operator and passenger at all times.

When driving at full speed on a dirt road, loose surfaces or wet grass, vehicle stopping distance will increase. If the vehicle is fully loaded, it will take longer to stop than with no load. When operating vehicle in wet weather conditions, remember that the brakes may need to be **lightly** applied in order to provide enough friction to dry the brake unit. If wet, the brakes will lose much of their effect.

Slow down when in unfamiliar terrain. Slow down when cresting a hill in an area that you are unfamiliar with.

Some hills are too steep to climb. If you attempt to climb a hill that is too steep or if you are unable to achieve adequate traction, **do not attempt to turn around on the hill. Slowly back straight down the hill using the service brake to control speed.**

POWER CONSUMPTION

The vehicle uses a combination starter/generator to both start the engine and charge the battery. The engine will not idle; therefore, the battery cannot be charged while the vehicle is stopped. Do not operate accessory items (such as accessory lights, radios, winch, etc.) excessively while the vehicle is stopped.

CAUTION Overuse of accessories may drain the battery and leave insufficient reserve to start the vehicle.

The generator is only capable of supplying 35 amps; therefore, operation of all accessories could result in the discharge of the battery even though the engine is running and the generator operating. Discharging the battery is known as deep cycling. The battery is not a deep cycle model, but is a starting battery. Multiple deep cycling of the battery will result in the premature failure of the battery.

Vehicle battery must be fully charged before initial use.

⚠ WARNING ⚠ *Hydrogen gas is generated as a natural part of the lead acid battery charging process. A 4% concentration of hydrogen gas is explosive and could cause severe injury or death. Charging must take place in an area that is adequately ventilated (minimum of 5 air exchanges per hour). To reduce the chance of battery explosion that could result in severe injury or death, never smoke around or charge batteries in an area that has open flame or electrical equipment that could cause an electrical arc.*

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

ENVIRONMENTAL CONCERNS

As a responsible user, practice respect for all wildlife and their habitat. Respect private property and comply with all local laws and regulations governing the use of light duty utility vehicles. Do not tamper with the exhaust system or governor. The exhaust system has been tuned to the engine for maximum performance. Removal or modification of the exhaust is annoying to other people and will not improve the performance of the vehicle.



WARNING To prevent severe injury or death while driving, be aware of the following:

Environmental hazards such as steep slopes, overhanging limbs, etc.

Danger of fire when vehicle is operated over dry combustible organic material.

When driving, be aware of environmental hazards such as steep slopes, overhanging limbs, etc. Be aware of the danger of fire when the vehicle is operated over dry combustible organic material.

OPTIONAL WINCH

This vehicle may be equipped with an optional winch (not available on ST SPORT). Read, understand and follow all of the following information on the operation and use of winch before attempting to operate it.

OPERATION OF THE WINCH

The winch can be mounted at the front or rear of the vehicle and moved to accommodate different situations. At the front, it is mounted under the center of the front cowl to a bracket attached to the front axle

as shown (Ref Fig. 2 on page 3-4). At the rear, the winch is mounted upside down in the hitch receiver.

NOTE

If mounting winch at rear of vehicle, the winch must be mounted upside down.

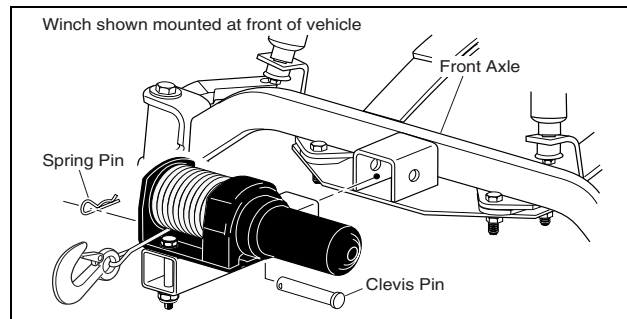


Fig. 2 Winch Mounted to Vehicle

Before moving the winch, unplug the winch connector from the wire harness. To move the winch from one end of the vehicle to the other, remove the spring pin, pull out the clevis pin and remove the winch mount tube from the receiver. Move to opposite end of vehicle and install by inserting clevis pin and securing with spring pin. Plug the winch connector into wire harness.

The winch remote control plugs into the receptacle on the seat support (Ref Fig. 3 on page 3-5).

To unwind the cable, locate the clutch knob on the winch. Pull out knob and rotate 90° to lock out. Using handsaver bar, pull cable from winch drum. Leave at least five turns of cable on drum. Re-engage drum by

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

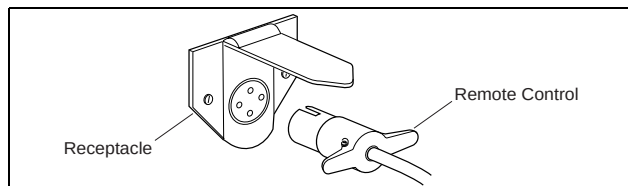


Fig. 3 Winch Remote Control

turning clutch knob 90°, returning it to original position (Ref Fig. 4 on page 3-5).

To wind cable, use handsaver bar to keep tension on the cable while activating remote. When winding cable, make sure the cable winds tightly and evenly onto the drum leaving no gaps that could cause premature wear to the cable. When using winch under a load, operate the remote control from as far to the side of the vehicle as possible. Do not operate winch while sitting in passenger seat. Read the following section (Winch Applications) before attempting to operate winch.

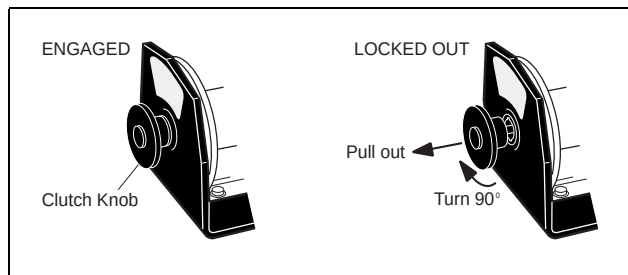


Fig. 4 Winch Clutch Knob

WINCH APPLICATIONS

The winch may be used for a number of purposes, including pulling the vehicle if it loses traction on unsuitable terrain.



Improper use of the winch could result in a number of conditions that could cause severe injury or death to operator, occupants of vehicle or bystander.

It is impossible to predict all conditions that the winch could be used, therefore the following warnings should not be considered as complete. Before operating the winch, consider the possible dangers and take precautions to protect yourself, your passenger and any bystanders.



To prevent severe injury or death to operator, occupants or bystanders, select the object to which the cable is attached with the following considerations:

Make sure the object cannot be pulled over or otherwise damaged.

The object the winch is attached to could fall on the vehicle and it's occupants.

If attaching the winch to a dead tree, a section could fall.

When pulling vehicle with winch, pull straight only. **Do not permit the cable to contact the side of the drum.**



Do not pull vehicle at angle. If the vehicle is pulled at an angle, it could turn over causing severe injury or death to anyone in the area. The winch cable could also become overstressed and break causing severe injury or death to anyone struck by the cable.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

If the vehicle becomes stuck or 'hung up' on an obstruction, the vehicle may be moved using the winch.

The winch may be installed in either the front or rear receiver and held in place with the locking pin provided.



WARNING

To prevent severe injury or death, read and understand the following before attempting to use the winch:

The winch is not intended to be used in any hoisting operation.

The rolling load capacity of the winch decreases with the steepness of the slope.

The winch is designed for intermittent duty only. The electric motor should not be allowed to become excessively hot. If the motor becomes uncomfortably hot to the touch, stop winching and allow the motor to cool.

Always wear thick leather gloves when handling the wire cable.

Replace frayed wire cable with a direct factory replacement only.

Never operate the winch with less than five (5) full turns of cable around the drum (Ref Fig. 5 on page 3-6).

If the winch motor stalls from overloading, do not continue to activate the winch remote control. The wire cable may become overstressed.

Do not attempt to pull loads exceeding 1500 lbs. (680 kg).

To pull out the cable, the free spool clutch knob must be used. Pull out and rotate the knob. If the cable is under any load the clutch may not release easily. Jog out some of the

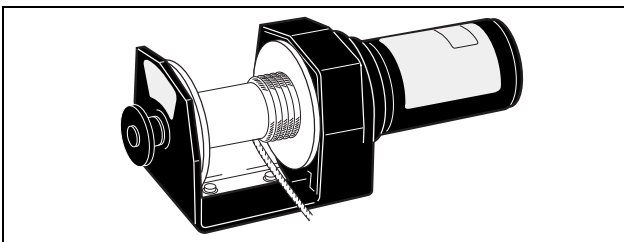


Fig. 5 Never Operate Winch with Less Than Five Turns Around Drum

cable to release the tension and operate clutch. Pull out the desired amount of cable and secure. Engage the drum by rotating the knob until it snaps in place. Never operate the winch unless the clutch is engaged.

Have all persons and pets leave the area while operating winch. Never allow anyone to remain in the vehicle.

To prevent damage to the wire cable, never hook the cable to itself. Always use a nylon sling (Ref Fig. 6 on page 3-7) (Ref Fig. 7 on page 3-7).

Stay clear of the winch, the cable and the cable hook. Place a heavy cloth, jacket or blanket over the cable to act as a damper should the cable break when operating the winch (Ref Fig. 7 on page 3-7).

Remember that the winch operation will drain the battery and may leave insufficient power to start the vehicle.

When operating the winch, keep the entire area in view.

Never release the free spool clutch while the cable is under load.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

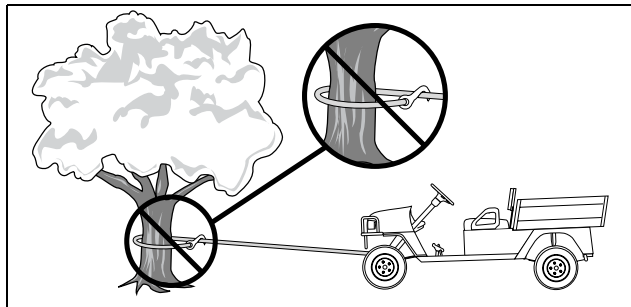


Fig. 6 Do Not Hook Cable to Itself

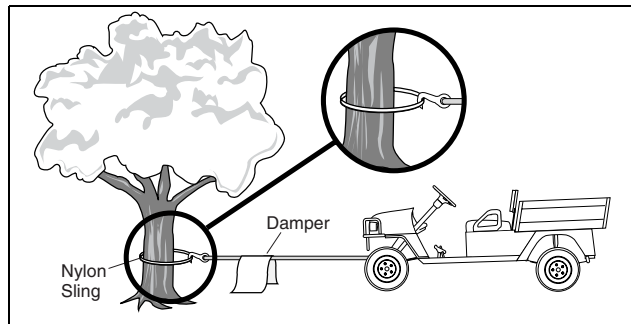


Fig. 7 Use a Nylon Sling and Install a Damper when Winching

Never work around the winch drum or the winch cable while it is under tension.

Unplug the winch switch before working on the winch drum in order to prevent inadvertent operation.

When operating winch, take up slack slowly. Stop winch before cable becomes tight and inspect all winching connections. Check winch attachment, hook attachment, nylon sling (if required) and load attachment.

Do not pull at an angle. This will cause the wire cable to pile up on one end of the winch. This may jam the winch causing damage to the cable and/or the winch. Pulling the vehicle at an angle can cause damage to the front suspension and may cause the vehicle to overturn. When pulling vehicle, pull straight only (Ref Fig. 8 on page 3-7).

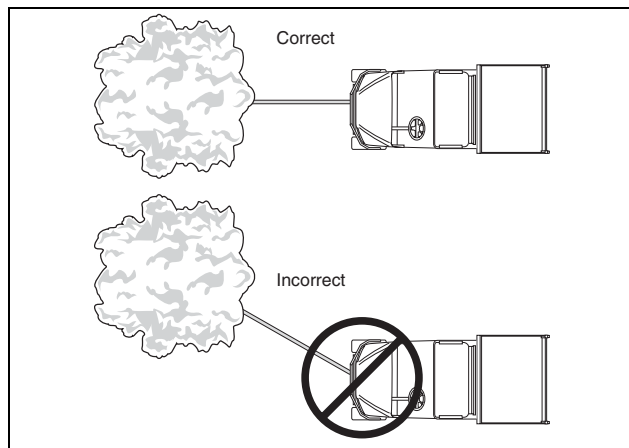


Fig. 8 Do Not Pull at Angle

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

If the vehicle is being used as an anchor to winch a load, it should have the park brake set and chocks installed on all wheels.

Never use the winch to lift people or other overhead loads.

Do not use the winch to secure loads. Use a tie down designed for the job.

Do not apply shock loads to the winch.

Do not attempt to modify or weld the winch.

CONTROLS AND INDICATORS

Vehicle controls and indicators consist of:

- key/light switch
- direction selector
- choke
- fuel gauge
- low oil pressure indicator light
- accelerator pedal
- combination service and park brake pedal
- horn

KEY/LIGHT SWITCH

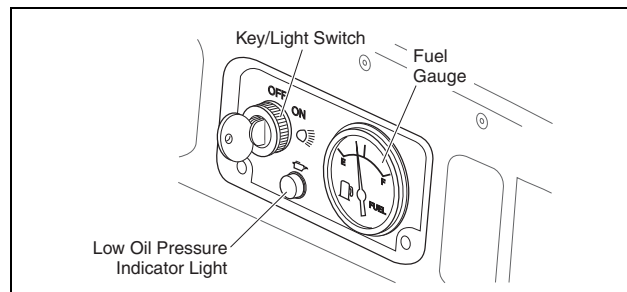


Fig. 9 Key/Light Switch, Low Oil Pressure Light and Fuel Gauge

Located on the dash panel, this switch enables the basic electrical system of the vehicle to be turned on and off by turning the key. To prevent inadvertent operation of the vehicle when left unattended, the key should be turned to the 'OFF' position and removed (Ref Fig. 9 on page 3-8).

If the vehicle is equipped with lights, the key switch has a position to operate them, indicated by the light icon.

NOTE *If the vehicle is equipped with factory installed custom accessories, some accessories remain operational with the key switch in the 'OFF' position.*

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

DIRECTION SELECTOR

CAUTION To reduce the possibility of component damage, the vehicle must be completely stopped before moving the direction selector.

Located on the seat support panel, this lever permits the selection of either 'F' (forward) or 'R' (reverse) (Ref Fig. 10 on page 3-9). Vehicle should be left in 'F' when unattended.

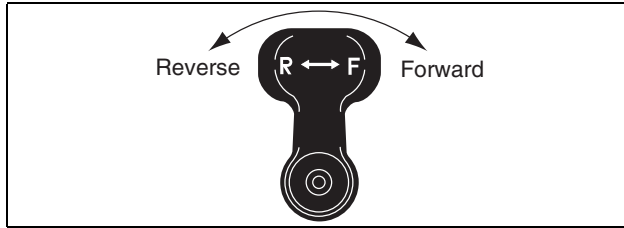


Fig. 10 Direction Selector

CHOKE

The choke is used to aid cold starting (Ref Fig. 11 on page 3-9). See 'Cold Starting' (Refer to page 3-14) for instructions on using the choke properly.

FUEL GAUGE

The fuel gauge (if equipped) will either be located on the dash panel (electric) (Ref Fig. 9 on page 3-8) or directly on the fuel tank (mechanical).

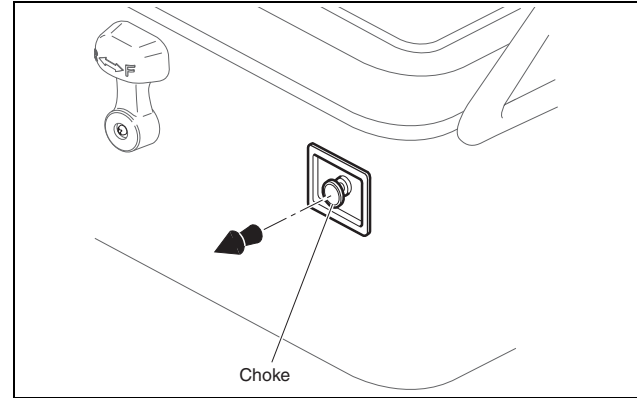


Fig. 11 Choke

LOW OIL PRESSURE INDICATOR LIGHT

A low oil pressure indicator light is located on the dash panel (Ref Fig. 9 on page 3-8). The light illuminates when the oil pressure is low. Check oil level. If oil level is between ADD and FULL mark on dipstick, a mechanical problem exists within the engine and the vehicle **must not be driven**. Contact a local distributor or authorized branch.

CAUTION To prevent engine damage, do not operate engine until oil pressure is corrected. Do not overfill engine. Too much oil may cause smoking or allow oil to enter the air filter enclosure.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

If oil level is below ADD mark on dipstick, add oil to bring level to FULL mark. Drive vehicle a short distance and check oil pressure. If oil light does not come on, continue to use vehicle.

ACCELERATOR PEDAL



Unintentional movement of the accelerator pedal will release the park brake and may cause the vehicle to move which could result in severe injury or death.

With the key switch 'ON', depressing the accelerator pedal starts the engine. When the pedal is released, the engine will stop (Ref Fig. 12 on page 3-10). To stop the vehicle more quickly, depress the service brake.

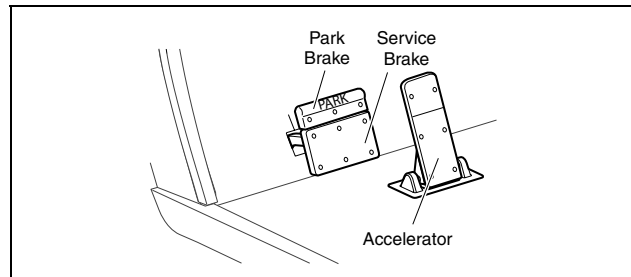


Fig. 12 Accelerator and Brake Controls

If key switch is 'ON' and park brake is set, depressing the accelerator inadvertently will release the park brake and will cause the vehicle to move which could cause severe injury or death.

Depressing the accelerator pedal will release the park brake if it is engaged. This is a feature to assure the vehicle is not driven with the park brake engaged. Depressing the accelerator pedal is **not** the preferred method of releasing the park brake.

NOTE

Depressing the **lower section of the brake pedal** is the preferred method of releasing the park brake to assure the longest service life of brake components.

COMBINATION BRAKE AND PARK BRAKE PEDAL

The brake pedal incorporates a park brake feature (Ref Fig. 12 on page 3-10). To engage, push down on the upper section of the pedal until it locks in place. The park brake will release when the service brake pedal is depressed. Use the lower section of the brake pedal to operate the service brake system.

HORN

The horn is operated by pushing the horn button located on the floor to the left of the brake pedal (Ref Fig. 13 on page 3-10).

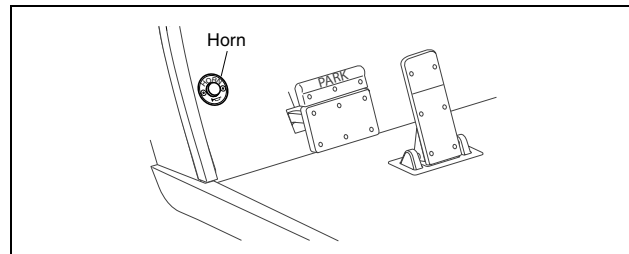


Fig. 13 Horn Button

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

LOAD BED



To reduce the possibility of severe injury or death, read, understand and follow the Danger label affixed

to the front of the load bed.

The electric lift bed is the standard bed for the ST350. A fixed bed is the only bed for the ST Sport.

A load bed warning label is affixed to the front of the bed. See Appendix A. For safe operation of the vehicle, this label must be understood. See the load bed warning label for maximum load. The load must be positioned in the bed as far forward as possible, distributed in such a way that its center of gravity must not be higher than height noted on label, and secured. Failure to follow these instructions may result in severe injury, damage the vehicle and/or cause the vehicle to tip over. Use extra care when operating loaded vehicle.

Do not permit any one to ride in the bed.

Do not drive the vehicle with the load bed raised or with the tailgate unsupported.

When using the electric lift on the ST 350, be sure to avoid backing up to the edge of a drop off, such as a loading dock or ravine. A misjudgment of distance or an unstable surface could result in the vehicle falling backwards.

Before operating load bed, check to ensure no one is behind the vehicle.



Never fill a gas can in the bed of a vehicle. Static discharge could ignite gasoline vapor and cause an explosion.

sion.

Always place a gas can on the ground before filling. Never fill a gas can in the bed of the vehicle. Static electricity is built up during the fueling process and could discharge causing the gasoline vapor to ignite.

ELECTRIC LIFT BED OPERATION (ST350 ONLY)



Exercise caution while operating the electric lift bed to ensure clothing is not caught during lifting or lowering procedure. Severe injury could result if bed is lowered and traps fingers or other body parts.

The electric lift switch is located on the driver side of the front seat panel (Ref Fig. 14 on page 3-11). Move the toggle switch lever up to raise the load bed and down to lower.

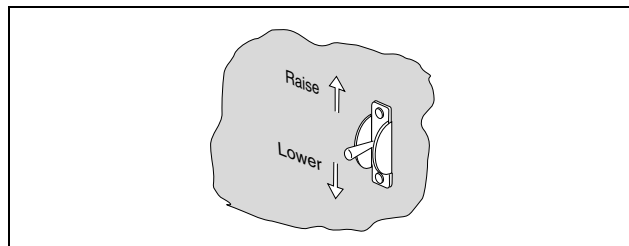


Fig. 14 Electric Lift Switch

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

OPERATING THE VEHICLE

CAUTION Improper use of the vehicle or the lack of proper maintenance may result in damage or decreased performance.

Read and understand the following warnings before attempting to operate the vehicle.

WARNING To reduce the possibility of severe injury or death resulting from loss of vehicle control, the following warnings must be observed:

When driving vehicle, consider the terrain, traffic conditions and the environmental factors which effect the terrain and the ability to control the vehicle.

Use extra care and reduced speed when driving on poor surfaces, such as loose dirt, wet grass, gravel, etc.

Stay in areas suitable for a light duty utility vehicle. Avoid rough, unimproved trails, areas with large rocks, stumps or holes and avoid steep slopes.

Maintain a safe speed when driving down hill. Use service brake to control speed when traveling down an incline. A sudden stop or change of direction may result in loss of control.

Slow down before and during turns. All turns should be made at reduced speed.

Never drive vehicle up, down, or across an incline that exceeds 14° (25% grade).

When driving the vehicle on unfamiliar terrain, drive the vehicle slowly, especially when cresting a hill.

If the vehicle is unable to climb a hill, do NOT attempt to turn it around. Turning the vehicle sideways on a hill could result in the vehicle rolling over. Slowly back down the hill using the service brake to control speed.

When operating the electric dump, do not back up to a drop off, such as a loading dock or ravine. Misjudgment or an unstable surface could cause the vehicle to fall backward into the drop off.

WARNING To reduce the possibility of severe injury or death resulting from improper vehicle operation, the following warnings must be observed:

The vehicle is a light duty utility vehicle. It is not an ATV (All Terrain Vehicle).

The vehicle is not a toy and engaging in horseplay is dangerous.

The vehicle should not be operated on public highways. It is not designed to comply with any DOT requirements.

The vehicle should be operated by persons with a valid driver's license. Children should not operate this vehicle.

Refer to GENERAL SPECIFICATIONS for seating capacity.

Use the park brake when the vehicle is parked.

Depressing accelerator pedal will release foot operated park brake and may cause inadvertent vehicle movement. Turn the key to the 'OFF' position whenever the vehicle is parked.

To prevent inadvertent movement when the vehicle is to be left unattended, engage the park brake, move direction

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

selector to forward position, turn key to 'OFF' position and remove key.

Make sure that the direction selector is in correct position before attempting to start the vehicle.

Always bring the vehicle to a complete stop before shifting the direction selector.

Do not take vehicle out of 'gear' while in motion (coast).

Check the area behind the vehicle before operating in reverse.

All occupants must be seated. Keep entire body inside vehicle and hold on while vehicle is in motion.

The vehicle is not equipped with seat belts and is not designed with roll over protection. The top and windshield do not provide protection from falling or flying objects.

A motorcycle helmet and protective clothing are recommended for operator and passenger at all times.

Do not permit anyone in the load bed while vehicle is in motion.

Use caution when operating the electric dump. Do not allow anyone behind the vehicle when operating the unit.

When operating the winch, observe all warnings and safety decals on the vehicle. Read, understand and follow the instructions located in the front part of this manual.

Do not winch at an angle. Do not exceed winch capacity.

RUN-IN

Check for oil or fuel leaks that could have developed in shipment from the factory. Avoid full throttle starts and rapid acceleration until the engine has achieved operating temperature.

All engines consume more oil than normal during the first hours of operation. As internal moving parts are run-in, oil consumption should gradually decrease until the rate of consumption stabilizes.

Check the oil level per the Periodic Service Schedule. Add oil if the level on the dipstick indicates that oil is in the add oil range (Ref Fig. 15 on page 3-13).

CAUTION Do not overfill engine. Too much oil may cause engine to smoke or spark plug fouling.

NOTE Both the oil dipstick and fill cap must be in place before operating the engine. Failure to install the dipstick and fill cap will result in oil becoming contaminated and/or being discharged into the engine compartment.

The oil should be changed in accordance with the Periodic Service Schedule while the engine is warm. See SERVICE AND MAINTENANCE for checking oil level and changing oil procedures.

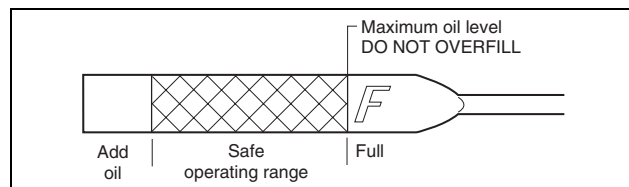


Fig. 15 Check Oil Level on Dipstick

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

COLD STARTING

Starting a cold engine **may** require use of the choke. Depress the accelerator approximately 1" (2.5 cm) or until the starter just begins to operate. Pull the choke out if required. Accelerate slowly and push the choke in completely when the engine runs smoothly.

CAUTION Do not allow the starter to operate continuously for more than 10 seconds. Allow 30 seconds between starting attempts. If the vehicle does not start on the third attempt, turn the key switch off, set the park brake and determine the cause of the problem.

If the vehicle had been running and the engine does not start within 10 seconds, use the choke.

STARTING AND DRIVING

⚠ WARNING ⚠ *To reduce the possibility of roll-back which could result in severe injury or vehicle damage, do not release the service brake until engine has started.*

To operate vehicle:

- Apply the service brake, place the key in the key switch and turn it to the 'ON' position.
- Move the direction selector to the direction desired.
- Release the park brake by depressing the service brake pedal until the park brake releases.
- Slowly depress the accelerator pedal to start the engine. Release service brake when engine starts.
- When the accelerator pedal is released, the ignition circuit is de-

energized and the engine stops. To stop the vehicle more quickly, depress the **service brake pedal**.

NOTE *When the direction selector is in the reverse position, a warning signal will sound to indicate that the vehicle is ready to run in reverse.*

STARTING THE VEHICLE ON A HILL

⚠ WARNING ⚠ *To reduce the possibility of roll-back which could result in severe injury or vehicle damage, do not release the service brake until engine has started.*

CAUTION Do not hold vehicle on hill by using accelerator and engine. This will cause premature and excessive wear to drive train components.

To reduce the possibility of permanent damage to the drive system, it is important to prevent excessive roll-back when starting the vehicle on a hill.

Place left foot on service brake and release the park brake. Depress accelerator with right foot and release the service brake by lifting left foot.

COASTING

⚠ WARNING ⚠ *To reduce the possibility of severe injury or death from coasting at above recommended speeds, limit speed with service brake.*

On steep hills, it is possible for the vehicle to coast at greater than normal speeds encountered on a flat surface. To reduce the possible loss

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

of vehicle control and severe drivetrain damage, speeds should be limited to no more than the maximum governed speed on level ground (see GENERAL SPECIFICATIONS). Limit speed by applying service brake.

FUEL



WARNING To reduce the possibility of severe injury or death from improper fuel handling:

Do not smoke near the fuel tank.

Do not refuel near open flame or electrical items which could produce a spark.

Always handle gasoline in a well ventilated area.

Always wear eye protection to protect against splashed fuel and fuel vapors.

Always allow adequate space for the expansion of gasoline. Leave at least 1" (2.5 cm) space below bottom of filler neck.

Inspect fuel cap, tank and other components for leaks or deterioration that could cause a hazardous condition.

The fuel tank is located under the seat on the passenger side of the vehicle (Ref Fig. 16 on page 3-15). Fill the tank with fresh, clean, automotive grade gasoline (Ref Fig. 44 on page 3-40). High altitude or heavy use/load applications may benefit from higher octane gasoline.

Do not use gasoline which contains Methanol.



CAUTION Some fuels, called oxygenated or reformulated gasoline, are gasoline blended with alcohols or ethers. Excessive amounts of

these blends can damage the fuel system or cause performance problems. If any undesirable operating symptoms occur, use gasoline with a lower percentage of alcohol or ether.

Do not overfill the fuel tank. Allow adequate space for the expansion of gasoline. Leave at least 1" (2.5 cm) space below bottom of filler neck.

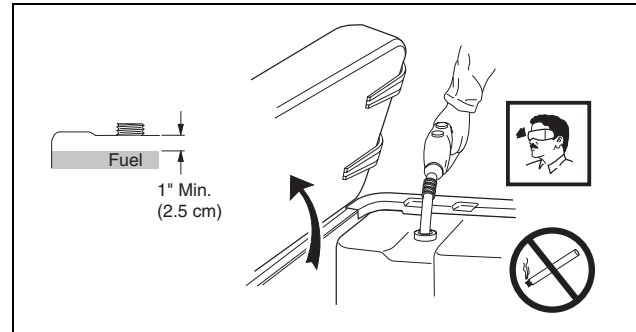


Fig. 16 Fueling

BATTERY



CAUTION Excessive use of accessories may drain the battery and leave insufficient reserve to start the vehicle.

The vehicle uses a combination starter/generator to both start the engine and charge the battery. The engine will not idle; therefore, the battery cannot be charged while the vehicle is stopped. Do not operate

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

accessory items (such as accessory lights, radios, winch, etc.) excessively while the vehicle is stopped.

The generator is capable of supplying 35 amps; therefore, operation of all accessories could result in the discharge of the battery even though the engine is running and the generator operating. Discharging the battery is known as deep cycling. The battery is not a deep cycle model, but is a starting battery. Multiple deep cycling will result in the premature failure of the battery.

If the vehicle battery has become discharged, it must be charged using a 12 Volt charger that is rated at 10 amps or less and in accordance with all instructions provided by the manufacturer of the charger.

LABELS AND PICTOGRAMS

Vehicles may be labeled with pictograms as a method of conveying information or warnings. Appendix A illustrates and explains pictograms that may appear on the vehicle. Not all pictograms shown in Appendix A will be found on your vehicle.

SUN TOP AND WINDSHIELD



The sun top does not provide protection from roll over or falling objects.

The windshield does not provide protection from tree limbs or flying objects.

The sun top and windshield provide some protection from the elements; however, they will not keep the operator and passenger dry in a downpour. For complete protection from the elements, a cab can be installed on the ST 350 (not available for ST SPORT). This vehicle is not equipped with seat belts and the sun top has not been designed to

provide roll over protection. In addition, the sun top does not protect against falling objects nor does the windshield protect against flying objects and tree limbs. Keep arms and legs inside of vehicle while it is moving.

12 VOLT POWER OUTLET

CAUTION

Overuse of accessories may drain the battery and leave insufficient reserve to start the vehicle.

A 12 volt power outlet, rated at 15 amps, is located to the left side of the key/light switch (Ref Fig. 17 on page 3-16). It provides constant power for accessories equipped with a 12 volt plug.

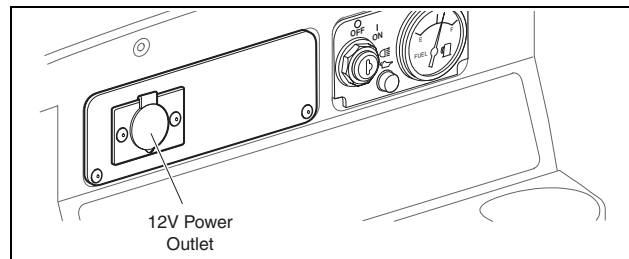


Fig. 17 12 Volt Power Outlet

TOWING A TRAILER

The vehicle is equipped with a receiver that can be fitted with a standard 1 7/8" ball. The trailer and its load must not exceed 500 lbs (227 kg) and no more than 50 lbs (23 kg) tongue weight may be attached to the hitch. Remember that the overall capacity of the vehicle, operator,

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

passenger, contents of load bed and accessories must be reduced to compensate for the trailer and load.

The range of motion of the trailer is limited by the ball and hitch. The trailer should not be used on rough trails or over objects such as logs, large rocks, holes, etc.

Never install baskets or extensions using the hitch receivers (front or rear). Such items will change the performance characteristics of vehicle and result in unsafe handling, possible roll over or vehicle damage.

VEHICLE CLEANING AND CARE

VEHICLE CLEANING



WARNING *To reduce the possibility of severe injury or vehicle damage, read and understand all instructions supplied by manufacturer of pressure washer.*



CAUTION When pressure washing exterior of vehicle, do not use pressure in excess of 700 psi. To reduce the possibility of cosmetic damage, do not use any abrasive or reactive solvents to clean plastic parts.

It is important that proper techniques and cleaning materials be used. Using excessive water pressure may cause severe injury to operator or bystander, damage to seals, plastics, seat material, body finish or electrical system. Do not use pressure in excess of 700 psi to wash exterior of vehicle.

Clean windshield with lots of water and a clean cloth. Minor scratches may be removed using a commercial plastic polish or Plexus® plastic cleaner available from the service parts department.

Normal cleaning of vinyl seats and plastic or rubber trim requires the use of a mild soap solution applied with a sponge or soft brush and wipe with a damp cloth.

Removal of oil, tar, asphalt, shoe polish, etc. will require the use of a commercially available vinyl/rubber cleaner.

The painted surfaces of the vehicle provide attractive appearance and durable protection. Frequent washing with lukewarm or cold water and mild detergent is required to preserve the painted surfaces.

Occasional cleaning and waxing with non-abrasive products designed for 'clear coat' automotive finishes will enhance the appearance and durability of the painted surfaces.

Corrosive materials used as fertilizers or for dust control can collect on the underbody of the vehicle. These materials will cause corrosion of underbody parts unless flushed occasionally with plain water. Thoroughly clean any areas where mud or other debris can collect. Sediment packed in closed areas should be loosened to ease its removal, taking care not to chip or otherwise damage paint.



NOTE *If the engine does not start or runs improperly after washing, remove the spark plug wires (by pulling the spark plug boots, never the wires). Dry all connections with forced air. Reinstall the wires.*

VEHICLE CARE PRODUCTS

To help maintain the vehicle there are several products available through local Distributors, authorized Branches, or the Service Parts Department.

- Touch-up paint specially formulated to match vehicle colors for use on both metal and molded plastic bodies. (P/N 28140-G** and

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

28432-G** for solid colors; 75831-G** for camouflage colors)

- Battery Protectant formulated to form a long-term, flexible, non-tacky, dry coating that will not crack, peel or flake over a wide temperature range. (P/N 75500-G01)
- White Lithium Grease designed to provide lubrication protection in areas where staining or discoloring is a problem, or in areas of extreme temperature ranges. (P/N 75502-G01)
- Penetrant/Lubricant, a 4-in-1 product that penetrates seized parts, lubricates leaving a light lubricating film, reduces corrosion by adhering to wet or dry surfaces and displaces moisture, sealing against future moisture return. (P/N 75503-G01)
- Multi-purpose Cleaner and Degreaser that contains natural, environmentally safe solvents. (P/N 75504-G01)
- Multi-purpose Hand Cleaner is an industrial strength cleaner containing no harsh solvents, yet gently lifts grease off hands. May be used with or without water. (P/N 75505-G01)
- Battery Cleaner that neutralizes battery acids and dissolves terminal corrosion and can be rinsed with water. (P/N 75506-G01)
- Biodegradable Cleaner that breaks down grease to be easily wiped or rinsed away. (P/N 75507-G01)
- Multi-purpose Value Pack sampler includes 4 ounce (118 ml) aerosol cans of Battery Protector, Penetrant/Lubricant, White Lithium Grease, and Carburetor and Choke Cleaner. (P/N 75508-G01)
- Plexus® plastic cleaner and polish removes minor scratches from windshield. (P/N 28433-G**)

REPAIR

LIFTING THE VEHICLE

Tool List

Qty. Required

Floor jack.....	1
Jack stands.....	4
Chocks.....	4



WARNING To prevent possible injury or death resulting from a vehicle falling from a jack, be sure the vehicle is on a firm and level surface. Never get under a vehicle while it is supported by a jack. Use jack stands and test the stability of the vehicle on the stands. Always place chocks in front and behind the wheels not being raised. Use extreme care since the vehicle is extremely unstable during the lifting process.

Some servicing operations may require the rear wheels or the entire vehicle be raised.

Install chocks in front and behind each front wheel (Ref Fig. 18 on page 3-19). Center jack under rear bumper. Raise vehicle and locate a jack stand under the outer end of each rear axle.

Lower jack and test the stability of the vehicle on the two jack stands.

Place the jack at the center of the front axle. Raise the vehicle and position jack stands under the frame crossmember as indicated.

Lower jack and test the stability of vehicle on the four jack stands.

If only front or rear of vehicle is to be raised, place the chocks in front and behind each wheel not being raised in order to stabilize the vehicle.

Lower the vehicle by reversing the lifting sequence.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

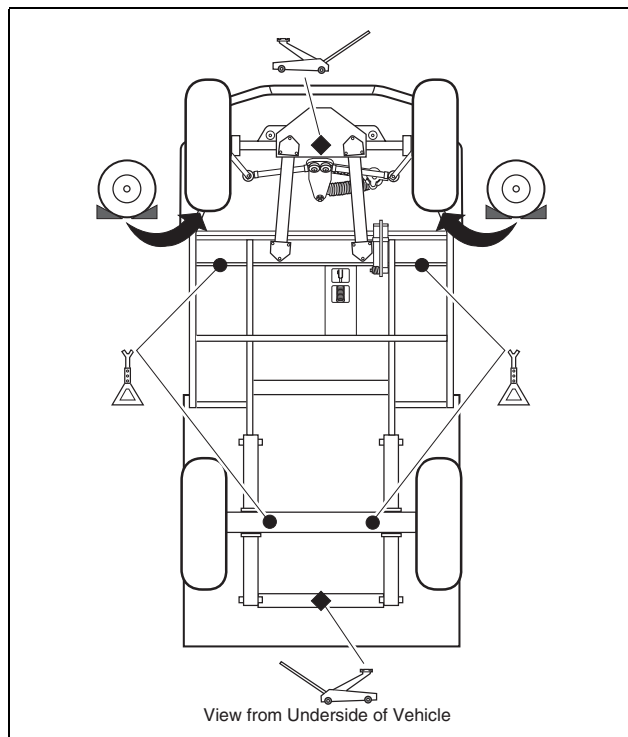


Fig. 18 Lifting the Vehicle

WHEELS AND TIRES

NOTE Standard tires for this vehicle are uni-directional and should never be moved from one side of vehicle to the other.

This vehicle comes standard with uni-directional tires. Left side tires should always remain on the left side of the vehicle. Right side tires should always remain on the right side of the vehicle. Uni-directional tires have an arrow on the sidewall indicating direction of rotation when moving forward. Tire condition should be inspected per the Periodic Service Schedule (Ref Fig. 24 on page 3-26). Inflation pressures should be checked when the tires are cool. Be sure to install valve dust cap after checking or inflating.

Tire Repair

Tool List

Qty. Required

Lug wrench, 3/4"	1
Impact socket, 3/4", 1/2" drive	1
Impact wrench, 1/2" drive.....	1
Torque wrench, 1/2" drive	1

! WARNING !

A tire explosion can cause severe injury or death. Never exceed inflation pressure rating on tire sidewall.

To reduce the possibility of tire explosion, pressurize tire with small amount of air applied intermittently to seat beads. Due to the low volume of the small tires, overinflation can occur in seconds. Never exceed the tire manufac-

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

turer's recommendation when seating a bead. Protect face and eyes from escaping air when removing valve core.

To reduce the possibility of severe injury caused by a broken socket when removing wheels, use only sockets designed for impact wrench use.

Use caution when inflating tires. Overinflation could cause the tire to separate from the wheel or cause the tire to explode, either of which could cause severe injury.

Use caution when inflating tires. Due to the low volume of the small tires, overinflation can occur in seconds. Overinflation could cause the tire to separate from the wheel or cause the tire to explode.

Tire inflation will depend on the type of tires fitted but under no condition should inflation pressure be higher than recommended on the tire sidewall. Standard and optional tires should be inflated to pressure designated in GENERAL SPECIFICATIONS on page 4-1. If pressure is not designated in GENERAL SPECIFICATIONS, inflate to pressure designated on tire sidewall. **All four tires** should have the same pressure for optimum handling characteristics. Be sure to install the valve dust cap after checking or inflating.

The vehicle is fitted with low pressure tubeless tires mounted on one piece rims. When removing wheels with an impact wrench, use only impact sockets. Regular sockets are not designed for impact pressures exerted by power tools.

Generally, the most cost effective way to repair a puncture in the tread is to use a commercial tire plug.

NOTE *Tire plug tools and plugs are available at most automotive parts outlets and have the advantage of not requiring the tire be removed from the wheel.*

If the tire is flat, raise vehicle and remove wheel. Refer to 'Lifting the Vehicle' for proper lifting procedure and safety information. Inflate tire to maximum recommended pressure. Immerse the tire in water to locate the leak and mark with chalk. Insert tire plug in accordance with manufacturer's specifications.



To reduce the possibility of severe injury, be sure mounting/demounting machine is anchored to floor.

Wear OSHA approved safety equipment when mounting/demounting tires.

If the tire is to be removed or mounted, the tire changing machine manufacturer's recommendations must be followed in order to reduce possibility of severe injury. Be sure to position tire on wheel correctly. Arrow on tire indicates rotation when moving forward.

Wheel Installation



To reduce the possibility of component damage, do not tighten lug nuts to more than 85 ft. lbs. (115 Nm) torque.



NOTE *It is important to follow the 'cross sequence' pattern when installing lug nuts. This will assure even seating of the wheel against the hub.*

With the valve stem to the outside, mount the wheel onto the hub with lug nuts. Be sure to position the wheel on hub correctly with arrow indicating direction of rotation when moving forward. Finger tighten lug nuts in a 'cross sequence' pattern (Ref Fig. 19 on page 3-21). Tighten lug nuts to 50 - 85 ft. lbs. (70 - 115 Nm) torque in 20 ft. lbs. (30 Nm) increments following the 'cross sequence' pattern.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

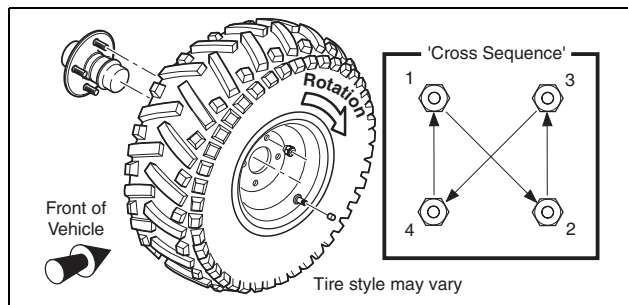


Fig. 19 Wheel Installation

LIGHT BULB REPLACEMENT

For vehicles with headlights mounted in cowl, locate the two screws on backside of cowl that secure headlight (Ref Fig. 20 on page 3-21). Remove screws, pull headlight out and disconnect wires. Connect wires to new headlight, install in cowl and secure with screws previously removed.

To replace the turn signal light bulb, support turn signal housing from backside of cowl while removing two screws securing lens (Ref Fig. 20 on page 3-21). Install new bulb and replace lens.

To replace the tail and brake light bulb, roll the rubber bezel from around the edge of the taillight and remove lens (Ref Fig. 21 on page 3-21). Install replacement bulb and replace lens.

FUSE REPLACEMENT

To replace fuses, locate the fuse block under the driver side seat. Pull out old fuse and replace with a new automotive type fuse. Headlight

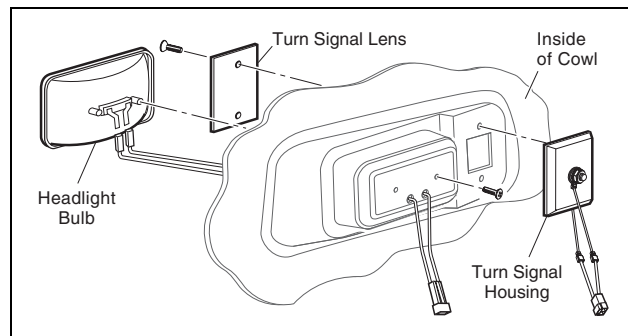


Fig. 20 Headlight and Turn Signal Bulb Replacement

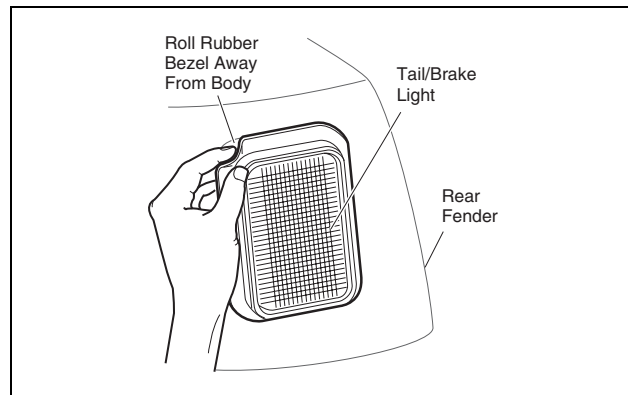


Fig. 21 Tail and Brake Light Bulb Replacement

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

and taillight bulbs and fuses are available from a local Distributor, an authorized Branch or the Service Parts Department.

VEHICLE WITH A DISCHARGED BATTERY



To reduce the possibility of severe injury or death from inadvertent motion, do not attempt to 'jump

start' a vehicle.

The vehicle is equipped with a starter/generator and does not idle. When starting the engine, the starter/generator functions as a starter and with the engine running, it functions as a generator.

With the short running times associated with this kind of vehicle, the generator is more than adequate to maintain the battery charge level. The generator is not designed to charge a discharged battery.

When engine starts, the clutches engage and cause vehicle to move making 'jump starting' both dangerous and impractical.

If the vehicle battery has become discharged, it must be charged using a 12 Volt charger that is rated at 10 amps or less. Read and understand all instructions provided by the manufacturer of the charger.

TRANSPORTING VEHICLE

TOWING



This vehicle is not designed to be towed.

It is recommended that the vehicle be moved by placing the entire vehicle on a trailer, flatbed truck or other suitable transport.

NEUTRAL LOCK

To prevent the driven clutch from turning the rear wheels during service operations, a neutral lock is located on the direction selector.

To operate:

Turn key switch to 'OFF' and lift seat. Pull out and rotate the neutral lock pin handle so that the pointed portion of the handle is to the side of the direction selector cam (Ref Fig. 22 on page 3-23). Move direction selector towards the area between 'F' and 'R'. During that motion, the pin will snap into the hole in the direction selector mounting bracket preventing any movement. When in this position, the direction selector remains locked in the neutral position. To unlock the direction selector, pull the neutral lock pin handle out and rotate until the pointed portion of the handle fits into the hole in the direction selector cam.

HAULING



To reduce the possibility of severe injury or death while transporting vehicle:

Secure the vehicle and contents.

Never ride on vehicle being transported.

Always remove windshield before transporting.

Maximum speed with sun top installed is 50 mph (80 kph).

If the vehicle is to be transported at highway speeds, the sun top must be removed and the seat bottom secured. When transporting vehicle below highway speeds, check for tightness of hardware and cracks in sun top at mounting points. Always remove windshield when transporting. Always check that the vehicle and contents are adequately secured before transporting. The rated capacity of the trailer or truck

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

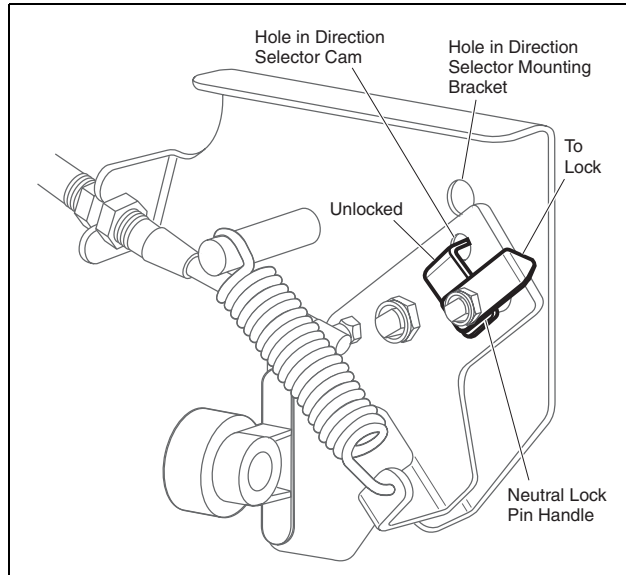


Fig. 22 Neutral Lock

must exceed the weight of the vehicle (see GENERAL SPECIFICATIONS for vehicle weight) and load. Lock the park brake and secure the vehicle using ratchet tie downs.

SERVICE AND MAINTENANCE



To reduce the possibility of severe injury or death from improper servicing techniques:

ing techniques:

Do not attempt any type of servicing operations before reading and understanding all notes, cautions and warnings in this manual.

Any servicing requiring adjustments to be made to the powertrain while the engine is running must be made with both drive wheels raised and vehicle properly supported on jack stands.

To reduce the possibility of engine damage, never operate vehicle at full throttle for more than 4 - 5 seconds while vehicle is in a 'no load' condition.



Wear eye protection when working on the vehicle. Use extra care when working around batteries, or using solvents or compressed air.

To reduce the possibility of causing an electrical arc, which could result in a battery explosion, turn off all electrical loads from the battery before removing battery wires.



Wrap wrenches with vinyl tape to reduce the possibility of a dropped wrench 'shorting out' a battery, which could result in an explosion.

Reduce the possibility of accidental starting by removing and grounding spark plug wires and disconnecting battery at negative terminal before servicing.

The electrolyte in a battery is an acid solution which can cause severe burns to the skin and eyes. Treat all electrolyte spills to the body and eyes with extended flushing

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

with clear water. Contact a physician immediately.

Any electrolyte spills should be neutralized with a solution of 1/4 cup (60 ml) sodium bicarbonate (baking soda) dissolved in 1 1/2 gallons (6 liters) of water and flushed with water.

Aerosol containers of battery terminal protectant must be used with extreme care. Insulate metal container to reduce the possibility of can contacting battery terminals which could result in an explosion.

Always install a positive stop to prevent load bed from unexpectedly falling.

It is in the best interest of both vehicle owner and service technician, to carefully follow the procedures recommended in this manual. Preventative maintenance, applied at recommended intervals, is the best guarantee for keeping the vehicle both dependable and economical.

This vehicle will give years of satisfactory service, providing it receives regular maintenance. Refer to the Periodic Service Schedule for appropriate service intervals (Ref Fig. 24 on page 3-26). Refer to Lubrication Points for appropriate lubrication locations (Ref Fig. 33 on page 3-32).

In any product, components will fail to perform properly as the result of normal use, age, wear or abuse.

A vehicle requiring repair indicates the vehicle is no longer functioning as designed and should be considered potentially hazardous. Use extreme care when working on any vehicle. When diagnosing, removing or replacing any components that are not operating properly, consider the safety of yourself and those around you, should the component move unexpectedly.

Some components are heavy, spring loaded, highly corrosive, explosive, may produce amperage or reach high temperatures. Gasoline, carbon monoxide, battery acid and hydrogen gas could result in serious bodily injury to the technician/mechanic and bystanders if not treated with utmost caution. Be careful not to place hands, face, feet or body in a location that could expose them to injury should an unforeseen dangerous situation occur.



To prevent personal injury or death, observe the following:

Before working on the vehicle, remove all jewelry (rings, watches, necklaces, etc.)

Be sure that no loose clothing or hair can contact moving parts.

Use care not to touch hot objects.

Raise entire vehicle and support on jack stands before attempting to run or adjust powertrain.

Hydrogen gas is formed when charging batteries. Do not charge batteries without adequate ventilation.

Do not permit open flame or anyone to smoke in an area that is being used for charging batteries. A concentration of 4% hydrogen gas or more is explosive.

Engine exhaust gas (carbon monoxide) is deadly. Carbon monoxide is an odorless, colorless gas that is formed as a natural part of incomplete combustion of hydrocarbon fuels. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.

The following are symptoms of carbon monoxide inhalation:

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

- Dizziness
- Vomiting
- Intense headache
- Muscular twitching
- Weakness and sleepiness
- Throbbing in temples

If any of these symptoms are experienced, get fresh air immediately. Never work around or operate a vehicle in an environment that does not ventilate exhaust gases from the area.

SERIAL NUMBER PLATE LOCATION

The serial number and manufacturing date code are located on a plate on the passenger side of the dash housing of the vehicle (Ref Fig. 23 on page 3-25).

Design changes take place on an ongoing basis. In order to obtain correct components for the vehicle, the manufacturing date code, serial number and vehicle model must be provided when ordering service parts.

CAUTION To prolong vehicle life, some maintenance items must be serviced more frequently on vehicles used under severe driving conditions such as extreme temperatures, extreme dust/debris conditions, frequent use with maximum load.

To access powertrain for routine maintenance, lift or remove seat. Additional access may be obtained by raising or removing the load bed. For

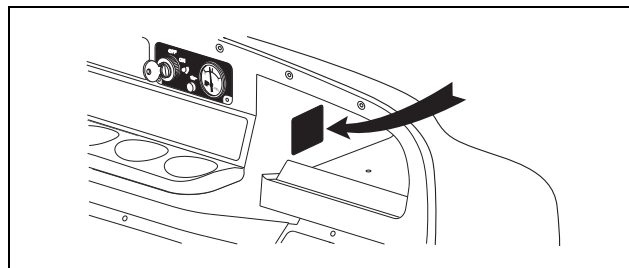


Fig. 23 Serial Number Plate Location

major repair, refer to appropriate Technician's Repair and Service Manual.

Some service procedures may require the vehicle to be lifted. Refer to LIFTING THE VEHICLE for proper lifting procedure and safety information.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

PERIODIC SERVICE SCHEDULE

✓ Check ♦ Clean, Adjust, etc. ▲ Replace	
To perform service that is listed in this schedule but not described in this manual, contact a local Service Representative or see the Repair and Service Manual for this vehicle.	
NOTE: Some maintenance items must be serviced more frequently on vehicles used under severe driving conditions	
DAILY	
	BEFORE USE: ✓ Check service brake general operation ✓ Check park brake function ✓ Check warning device function in reverse ✓ Check tire condition ✓ Check overall vehicle condition
WEEKLY	
TIRES	✓ Examine for cuts, excessive wear and pressure, see GENERAL SPECIFICATIONS
WHEELS	✓ Check for bent rims, missing or loose lug nuts
FUEL GAUGE	✓ Check for proper operation (at fueling), and fuel cap vent is free of dirt
ENGINE OIL	✓ Check and add if required - DO NOT OVERFILL
STARTER/GENERATOR BELT	✓ Check for tension, wear, cracks
MONTHLY - 20 HOURS (includes items listed in previous table & the following)	
WIRING	✓ Check all wiring for loose connections and broken/missing insulation
ACCELERATOR	✓ Check for smooth movement - DO NOT LUBRICATE CABLE
SERVICE BRAKE (MECHANICAL BRAKES)	✓ Conduct brake performance test
PARK BRAKE	✓ Check brake performance and adjust if required
CHOKE CABLE	✓ Check for smooth movement and adjustment - DO NOT LUBRICATE CABLE
CARBURETOR LINKAGE	✓ Check attachment, adjust as required
DIRECTION SELECTOR	✓ Check attachment, adjust as required
ENGINE	✓ Check for unusual noise, vibration, acceleration, oil leaks
COOLING FAN	✓ Check for build-up of foreign matter inside blower housing and fins, clean if required
STEERING ASSEMBLY	✓ Check for abnormal play, tightness of all hardware

Fig. 24 Periodic Service Schedule

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

TIE RODS/LINKAGES	✓ Check for excessive play, bent components or loose connections
REAR AXLE	✓ Check for leakage, add SAE 30 oil as required
QUARTERLY - 50 HOURS (includes items listed in previous tables & the following)	
FRONT AXLE	✓ Check for damage to axle and loose or missing hardware
FRONT SHOCK ABSORBERS	✓ Check for oil leakage and loose fasteners
FRONT SPRINGS	✓ Check for loose hardware, cracks at attachments
FRONT WHEEL ALIGNMENT	✓ Check for unusual tire wear, align if required
PARK BRAKE	✓ Check for bent/binding linkage rod ✓ Check for damage or wear to latch arm or catch bracket ♦ Lubricate as required, use light oil. DO NOT LUBRICATE CABLES OR BRAKE LATCH
REAR SHOCK ABSORBERS	✓ Check for oil leakage, loose mounting hardware
ENGINE ELECTRICAL SYSTEM	✓ Check coil/spark plug wires for cracks/loose connections
FUEL SYSTEM	✓ Check for leaks at tank, cap, system lines, filters, pump, carburetor ✓ Check system lines for cracks/deterioration
THROTTLE/GOVERNOR LINKAGE	✓ Check operation and governed speed
HARDWARE AND FASTENERS	✓ Check for loose or missing hardware and components ♦ Tighten or replace missing hardware
SEMI-ANNUAL - 125 HOURS (includes items listed in previous tables & the following)	
BATTERY	♦ Clean battery & terminals
DIRECTION SELECTOR	✓ Check for wear and smooth movement (lubricate shaft with light oil if required)
KING PINS	✓ Check for excessive play and tightness of retaining nuts ♦ Lubricate, use wheel bearing grease
STEERING ASSEMBLY	♦ Lubricate unit and idler arm, use wheel bearing grease
RACK END BALL JOINT	♦ Lubricate, use wheel bearing grease
REAR AXLE	✓ Check for unusual noise and loose or missing mounting hardware
AIR CLEANER	✓ Check filter element, clean/replace as required
OIL FILTER	♦ Clean in solvent (at oil change), replace 'O' rings if required
ENGINE OIL	▲ Replace with SAE 10W-30 or 10W-40 that meets or exceeds SF, SG, CC oil, DO NOT OVERFILL,
DRIVE BELT	✓ Check for cracks, fraying and excessive wear

Fig. 24 Periodic Service Schedule

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

ANNUAL - 250-300 HOURS (includes items listed in previous tables & the following)	
FRONT WHEEL BEARINGS	✓ Check and adjust as required, see Technician's Repair and Service Manual
REAR AXLE	✓ Check lubricant, add lubricant (SAE 30 oil) as required
SERVICE BRAKES	◆ Clean and adjust, see Technician's Repair and Service Manual ✓ Check brake shoe linings, see Technician's Repair and Service Manual
FUEL FILTER	◆ Replace
SPARK PLUGS	◆ Replace, gap new plugs (Ref. Capacities and Replacement Parts on page 3-40)
MUFFLER/EXHAUST	✓ Check mounting hardware; check for leaks at head and muffler gaskets
VALVES	✓ Check cold (intake/exhaust) per Technician's Repair and Service Manual
500 HOURS (includes items listed in previous tables & the following)	
TIMING BELT	✓ Check tension and for signs of wear/damage, replace if worn or damaged
CARBURETOR LINKAGE	◆ Clean
CYLINDER HEAD AND PISTONS	◆ Remove carbon from cylinder head and pistons ✓ Check valve seats for carbon buildup and clean as required

Fig. 24 Periodic Service Schedule

TIRE INSPECTION

Tire condition should be inspected per the Periodic Service Schedule (Ref Fig. 24 on page 3-26). Inflation pressures should be checked when the tires are cool. Be sure to install the valve dust cap after checking or inflating.

REPLACING THE FUEL FILTER



To prevent a possible explosion, do not smoke near the fuel tank or in an area where gasoline is being handled. Do not perform procedures involving the fuel system near open fire or electrical items which could produce a spark.

Do not handle gasoline in an area that is not adequately ventilated.

Always wear safety glasses to prevent possible eye injury from gasoline or gasoline vapor.

Using a pair of pliers, squeeze the tabs of the clamps together and slide them off the filter inlet and outlet. Pull the fuel filter up higher than the fuel pump to reduce the amount of gas that may spill. Twist and pull the hose from the tank off the filter first and plug. Then twist and pull filter out of the hose from the fuel pump and discard.



Orient direction of new fuel filter according to the FLOW arrow on the side of filter.

Install new fuel filter and reposition the clamps over the inlet and outlet.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

CHECKING THE OIL LEVEL

CAUTION Do not overfill engine. Too much oil may cause engine to smoke or spark plug fouling.

NOTE When adding oil between oil changes, do not mix brands and viscosity grades of oil. Both the oil dipstick and fill cap must be in place before operating the engine. Failure to install the dipstick and fill cap will result in oil becoming contaminated and/or oil being discharged into the engine compartment.

The oil should be checked with the engine warm. The vehicle must be on a level surface with the park brake engaged. Allow adequate time for oil to drain into the crankcase before checking.

Remove the dipstick and wipe off the entire area indicated with a lint free cloth (Ref Fig. 25 on page 3-29).

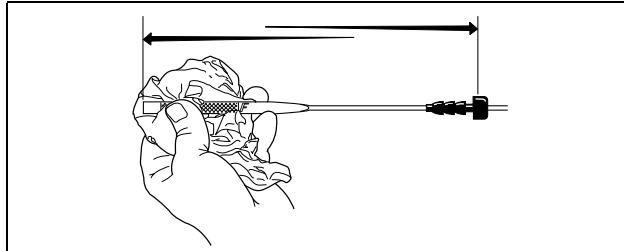


Fig. 25 Clean Entire Dipstick

Insert the dipstick **fully** into the dipstick hole and remove. Examine the level of oil on the dipstick.

The engine can be operated safely as long as oil is within the safe operating range as indicated on the dipstick. **Do not operate vehicle if oil level is below the safe area indicated on the dipstick** (Ref Fig. 26 on page 3-29).

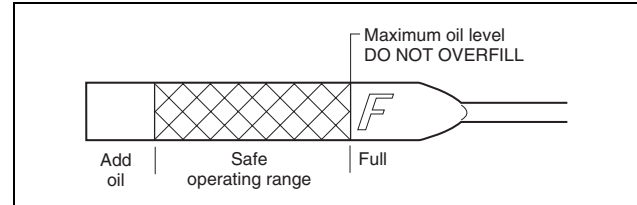


Fig. 26 Check Oil Level on Dipstick

Oil should be added to bring the level into the safe operating range. **Do not overfill.** Check that the oil fill cap and dipstick are firmly in place.

CHANGING THE OIL

Tool List

Qty. Required

Socket, 10 mm, 3/8" drive	1
Ratchet, 3/8" drive	1
Extension, 8", 3/8" drive.....	1
Oil drain pan.....	1

For maximum performance and longevity, the engine oil should be replaced every 125 hours of operation or semi-annually, whichever comes first.

The selection of oil is dependent upon the service that the vehicle will perform. Most vehicles require 10W-30 oil, whereas vehicles used at

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

capacity or near capacity load applications will require 10W-40 oil after a break-in (Ref Fig. 27 on page 3-30).

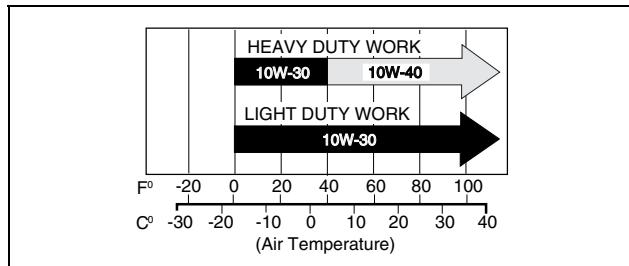


Fig. 27 Oil Viscosity Chart



WARNING To reduce the possibility of severe injury, wear rubber gloves to protect skin from exposure to hot, used oil and degreaser. These fluids contain chemicals known to cause cancer.

The oil should be changed with the engine warm. Park the vehicle on a level surface, engage the park brake and remove the key. Place a drain pan under the engine. Wipe the top of the engine clean with a cloth (Ref Fig. 28 on page 3-30). Remove the oil fill cap.

Clean the area around the filter. Oil drainage is accomplished by removing the three bolts securing the oil filter to the engine. Remove the filter by pulling it from the engine and allow the oil to drain. The 'O' rings may remain on the engine or the filter (Ref Fig. 29 on page 3-30).

At each oil change, thoroughly inspect filter before cleaning. At the first oil change, metal chips and lint may be found. This is normal, resulting

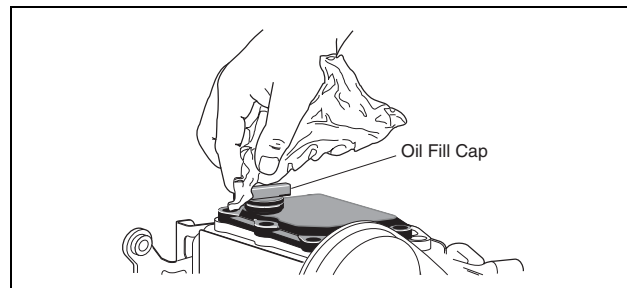


Fig. 28 Cleaning Top of Engine

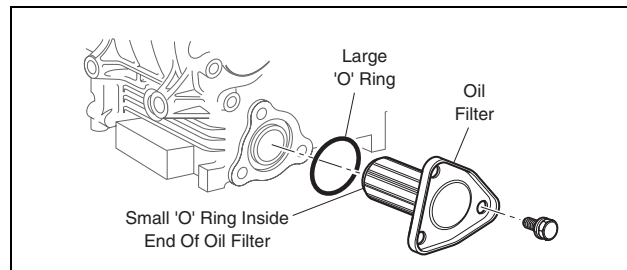


Fig. 29 Remove Oil Filter

from engine run-in. At subsequent oil changes, the presence of metal chips may indicate possible engine damage.



Wear eye protection to reduce the possibility of splashed solvent contacting the eyes when cleaning oil filter.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

Clean the filter by washing in any shop degreaser and brushing the metal screen clean with a soft brush (Ref Fig. 30 on page 3-31).

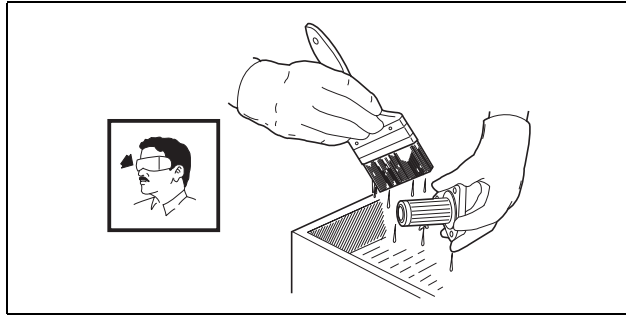


Fig. 30 Clean the Oil Filter

Blow out the filter with low pressure air 30 psi (210 kPa) or less from no closer than 3" (8 cm) and allow to air dry (Ref Fig. 31 on page 3-31).

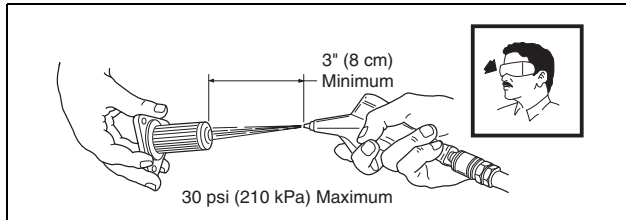


Fig. 31 Blow Out Oil Filter

Wipe the area around the filter mount with a clean, lint free cloth and inspect both filter 'O' rings for damage; replace if necessary. Install the

filter into the engine. The filter engages over a short nipple in the engine. The filter should slide easily onto the nipple and seat against the engine using light hand pressure only. Align the holes in the filter mounting plate with the holes in the engine. Install and hand tighten the bolts before tightening them firmly.

Add slightly less than 1 1/2 quarts (1.4 liters) to allow for possible residual oil left in engine (Ref Fig. 32 on page 3-31). The oil must be high quality oil that meets or exceeds API SF, SG, CC standards (Ref Fig. 44 on page 3-40). Check oil level on dipstick. If necessary, continue to add oil slowly and allow time for oil to flow down into engine. Check oil level on dipstick. **Do not overfill.**

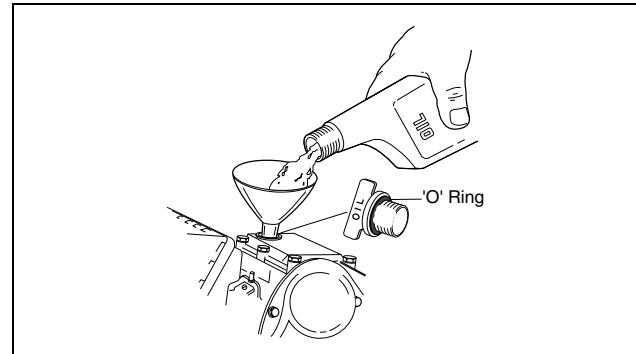


Fig. 32 Add Engine Oil

CAUTION Do not overfill engine. Too much oil may cause smoking or allow oil to enter the air filter enclosure.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

NOTE

Both the oil dipstick and fill cap must be in place before operating the engine. Failure to install the dipstick and fill cap will result in oil being discharged into the engine compartment.

Inspect oil fill cap 'O' ring and replace if necessary. Install the oil fill cap. Run the vehicle for one or two minutes and check the filter for oil leaks.

Check the oil level again with the vehicle on level ground. Oil should be added to bring the level into the safe operating range. **Do not overfill.** The engine can be operated safely as long as the oil is within the safe operating range as indicated on the dipstick. **Do not operate vehicle if oil level is below the safe area indicated on the dipstick.**

LUBRICATION

CAUTION

Do not use more than three (3) pumps of grease in each grease fitting at any one time. Excess grease may cause grease seals to fail or grease migration into areas that could damage components.

Putting more than three pumps of grease in a grease fitting could damage grease seals and cause premature bearing failure (Ref Fig. 33 on page 3-32).

AIR CLEANER INSPECTION AND REPLACEMENT

The air cleaner element is accessible by unsnapping the clips on the air canister and removing the cover and air filter element (Ref Fig. 34 on page 3-32). Clean inside of cover, canister and dust collector. Install the element and cover the same way they were removed. Be sure the positioning arrow on cover is pointing upward and all clips are fastened securely.

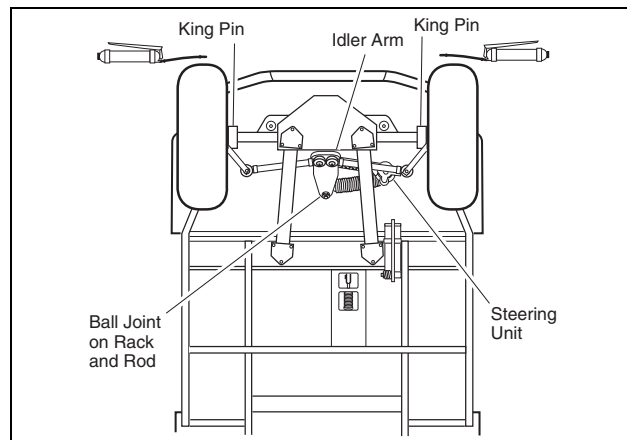


Fig. 33 Lubrication Points

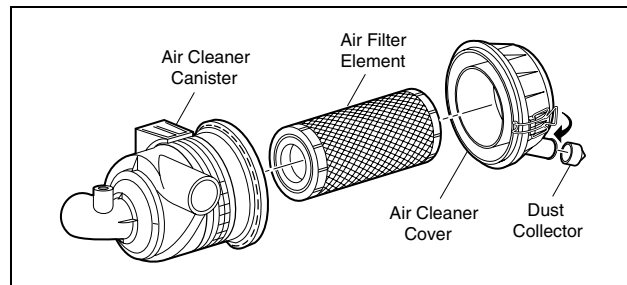


Fig. 34 Air Cleaner

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

Cleaning the Air Filter Element

CAUTION Do not use compressed air to clean the air filter. Doing so will damage the filter and will damage the engine.

If the element is in acceptable condition, loose dirt may be removed by tapping the filter lightly. Do not use oil on the filter element or any part of the unit. Install the element in the same way it was removed, being sure that the clips are fastened securely.

REAR AXLE

The rear axle is provided with a lubricant level check plug located on the driver side at the rear of the housing (Ref Fig. 35 on page 3-33). Unless leakage of rear axle lubricant is evident, an annual lubricant check is sufficient.

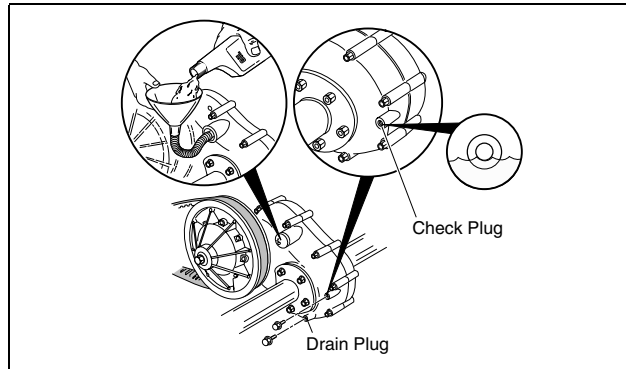


Fig. 35 Add, Check and Drain Rear Axle Lubricant

Checking the Lubricant Level

Tool List

Qty. Required

Socket, 13 mm, 3/8" drive	1
Ratchet, 3/8" drive	1
Funnel	1

Clean the area around the check and fill plugs. Remove the check plug. The correct lubricant level is **just** below the bottom of the threaded hole (Ref Fig. 44 on page 3-40). If lubricant is to be added, remove the fill plug and add lubricant using a funnel. Add lubricant slowly until lubricant starts to seep from the check plug hole. Install the check plug and the fill plug. In the event that the lubricant is to be replaced, a drain plug is provided at the bottom of the differential housing.

STARTER/GENERATOR BELT TENSION

Tool List

Qty. Required

Belt tension gauge	1
Wrench, 3/4"	1
Wrench, 9/16"	2
Ratchet, 3/8" drive	1
Socket, 3/4", 3/8" drive	1

The starter/generator belt tension should be checked after the first 15 - 20 hours and set to 75 - 80 lbs. (34 - 36 kg).

NOTE

A loose belt can cause audible vibration and squeal.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

Tighten a **new** starter/generator belt (Ref Fig. 44 on page 3-40) to 90 - 110 lbs. (41-50 kg) tension when a gauge is applied half way between the two pulleys (Ref Fig. 36 on page 3-34).

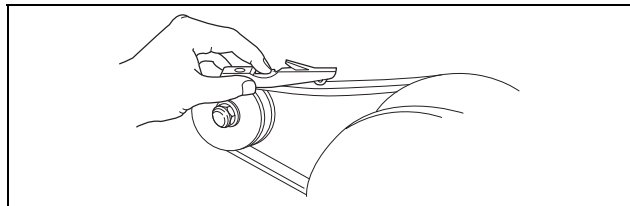


Fig. 36 Checking Belt Tension with Gauge

A **new** belt may be checked manually. A maximum deflection of 3/8" (10 mm) is acceptable (Ref Fig. 37 on page 3-34).

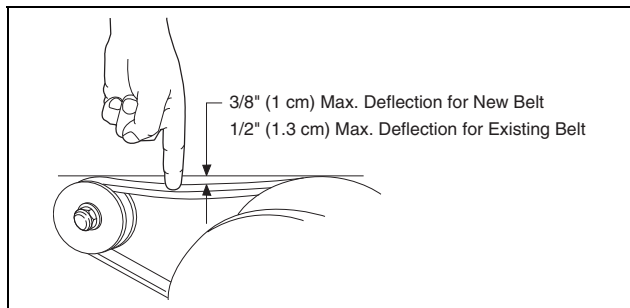


Fig. 37 Checking Belt Tension Manually

Tighten an **existing** belt to 75 - 80 lbs. (34 - 36 kg) tension using the same technique and inspect for cracking or wear. A maximum deflection of 1/2" (13 mm) is acceptable.

Adjusting the Belt

Loosen the starter/generator pivot bolt.

While holding the lower adjusting nut with a wrench, loosen the upper jam nut with another wrench. Move the lower nut up or down the adjustment bolt until proper belt tension is achieved. Hold the lower nut in place and tighten the upper jam nut against it (Ref Fig. 38 on page 3-34).

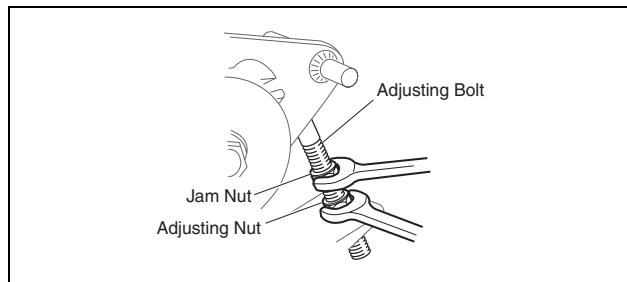


Fig. 38 Adjust Belt Tension

Tighten the starter/generator pivot bolt.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

BATTERY CLEANING

CAUTION To reduce the possibility of damage to vehicle or floor, neutralize acid before rinsing battery.

To reduce the possibility of damage to electrical components while cleaning, do not use a pressure washer.

Cleaning should take place per the Periodic Service Schedule (Ref Fig. 24 on page 3-26).

When cleaning the outside of the battery and terminals, first spray with a solution of sodium bicarbonate (baking soda) and water to neutralize any acid deposits before rinsing with clear water.

Use of a water hose without first neutralizing any acid, will move acid from the top of the battery to another area of the vehicle or storage facility where it will attack the metal structure or the concrete/asphalt floor. Additionally, a residue will be left on the battery which is conductive and will contribute to the discharge of the battery.

⚠ WARNING ⚠ To reduce the possibility of battery explosion that could result in severe injury or death, do not use metallic spray wand to clean battery and keep all smoking materials, open flame or sparks away from the battery.

The correct cleaning technique is to spray the top and sides of the battery with a solution of sodium bicarbonate (baking soda) and water. This solution is best applied with a plastic spray bottle. The solution should consist of 2 teaspoons (10 ml) of sodium bicarbonate (baking soda) mixed with 1 quart (1 liters) of clear water (Ref Fig. 39 on page 3-35). In addition to the battery, special attention should be paid to metal

components adjacent to the battery which should also be sprayed with the sodium bicarbonate (baking soda) solution.

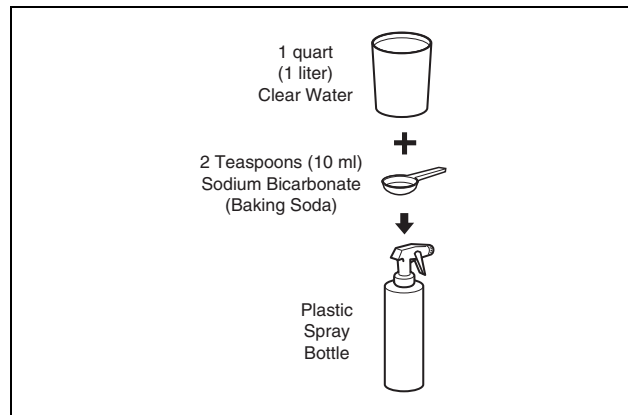


Fig. 39 Preparing Acid Neutralizing Solution

Allow the solution to sit for at least three minutes; use a soft bristle brush or cloth to wipe the tops of the battery to remove any residue that could contribute to the self discharge of the battery. Rinse the entire area with low pressure clear water. Do not use a pressure washer.

AIR INTAKE AND COOLING FINS

⚠ WARNING ⚠ To prevent possible burns, engine parts should be kept clean to reduce risk of overheating and ignition of accumulated debris.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

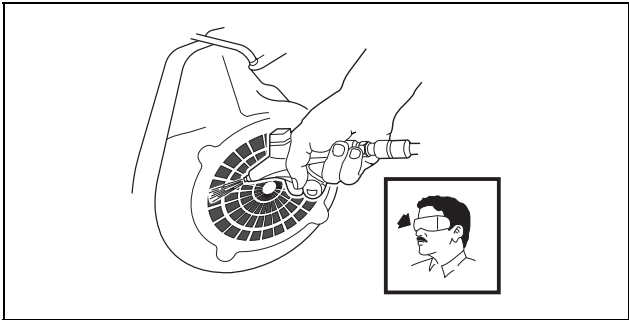


Fig. 40 Cleaning the Air Intake

After every off road use, allow to cool and then check for a build up of dirt and debris in the air intake and cooling fins. Dirt and debris may clog the engine's air cooling system. Clean areas shown to prevent engine damage (Ref Fig. 40 on page 3-36) (Ref Fig. 41 on page 3-36). Keep linkages, springs and controls clean. Keep area around muffler free of any combustible material.

SPARK PLUGS

Tool List

Spark plug socket, 13/16", 1/2" drive.....	1
Ratchet, 1/2" drive.....	1
Plug gauge, wire type.....	1
Anti-seize compound.....	AR
Torque wrench, 1/2" drive, ft. lbs.	1

Qty. Required

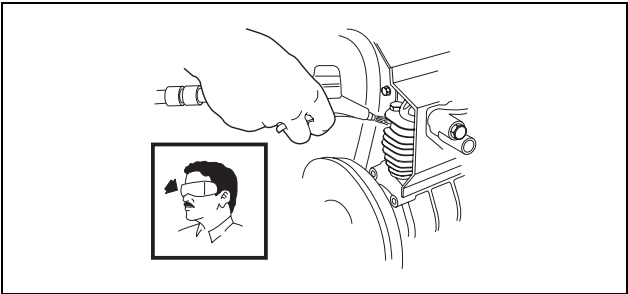


Fig. 41 Cleaning the Cooling Fins

CAUTION Use care not to over-tighten the plug. Over-tightening can cause damage to the aluminum cylinder head threads.

Remove and inspect the spark plugs at intervals per the Periodic Service Schedule (Ref Fig. 24 on page 3-26). All new spark plugs should be properly gapped before installation (Ref Fig. 44 on page 3-40). Apply a light coat of anti-seize compound and tighten to 18 ft. lbs. (24 Nm) torque.

Fouled spark plugs are indicated by a wet, black appearance. This could be caused by a dirty air filter element or other restrictions in the air intake system. Incorrectly adjusted valves, spark plug wires which are in poor condition or poor quality fuel could also contribute to the problem.

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

BRAKES

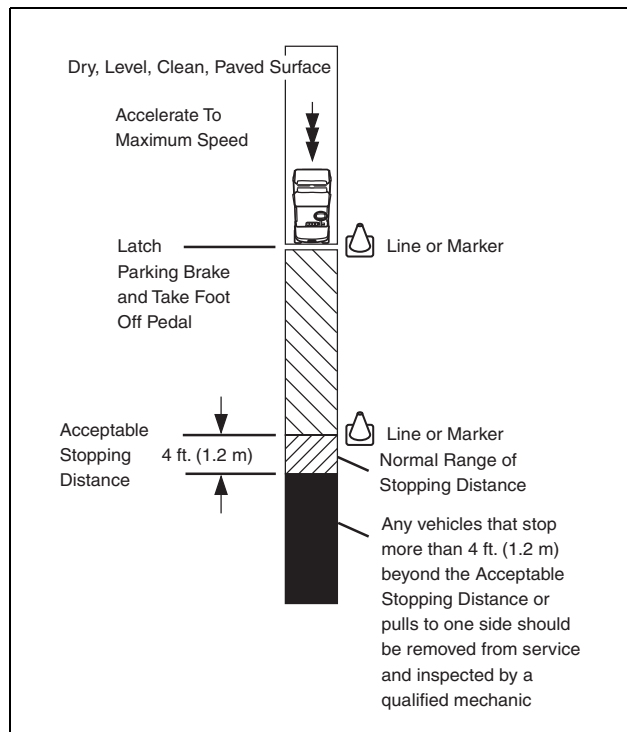


Fig. 42 Typical Brake Performance Test

⚠ WARNING ⚠

To reduce the possibility of severe injury or death, always evaluate pedal travel before operating a vehicle to verify some braking function is present.

All driving brake tests must be done in a safe location with regard for the safety of all personnel.

The Periodic Brake Performance Test should be performed regularly (Ref Fig. 42 on page 3-37) as an evaluation of braking system performance. It is useful as a method of identifying subtle loss of performance over time.

Periodic Brake Test for Mechanical Brakes

The purpose of this test is to compare the braking performance of the vehicle to the braking performance of new or 'known to be good' vehicles or to an established acceptable stopping distance. Actual stopping distances will be influenced by weather conditions, terrain, road surface condition, actual vehicle weight (accessories installed) and vehicle speed. No specific braking distance can be reliably specified. The test is conducted by latching the park brake to eliminate different pedal pressures and to include the affects of linkage mis-adjustment.

Establish the acceptable stopping distance by testing a new or "known to be good" vehicle and recording the stopping location or stopping distance. For fleets of vehicles, several vehicles should be tested when new and the range of stopping locations or distances recorded.

NOTE

Over time, a subtle loss of performance may take place; therefore, it is important to establish the standard with a new vehicle.

Drive the vehicle at maximum speed on a flat, dry, clean, paved surface (Ref Fig. 42 on page 3-37). Quickly depress the brake pedal to latch

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

the park brake at the line or marker in the test area and remove foot from pedal. The vehicle should stop aggressively. The wheel brakes may or may not lock. Observe the vehicle stopping location or measure the vehicle stopping distance from the point at which the brakes were latched. The vehicle should stop within the 'normal' range of stopping distances. If the vehicle stops more than 4 ft. (1.2 m) beyond the acceptable stopping distance or pulls to one side, the vehicle has failed the test and should be tested again.

If the vehicle fails the second test, it should **immediately** be removed from service. The vehicle **must** be inspected by a qualified mechanic who should refer to the TROUBLESHOOTING section in the Technician's Repair and Service Manual.

PROLONGED STORAGE



To prevent serious injury or death resulting from a possible explosion:

Do not handle fuel in an area that is not adequately ventilated. Do not smoke near the fuel tank or refuel near open flame or electrical items which could produce a spark.

Store vehicle in a clean, dry area. Do not store in same area as a stove, furnace, water heater, or other appliance that uses a pilot light or has a device that can create a spark.

When refueling, inspect the fuel cap for leaks or breaks that could result in fuel spillage.

Always wear safety glasses while refueling to prevent possible eye injury from gasoline or gasoline vapor.

Keep hands, clothing and jewelry away from moving parts. Use care not to contact hot objects. Raise the rear of the vehicle and support on jack stands before attempting to run the engine.

Preparing the engine for a prolonged storage period (30 days or more) calls for a few simple steps to prevent a build up of varnish and gum in the carburetor and corrosion in the engine.

- Raise the rear of the vehicle and support on jack stands. Refer to 'Lifting the Vehicle' for proper lifting procedure and safety information.
- Disconnect the fuel hose **at the fuel tank** and plug hose.
- With proper ventilation, depress the accelerator pedal and allow engine to run until it stops due to lack of fuel.
- Remove spark plugs (Refer to page 3-36) and pour about 1 oz. (30 ml) of engine oil into each cylinder. Replace spark plugs, ground spark plug wires and use starter to turn engine over a few seconds to distribute oil.
- Add a gasoline additive to the tank in accordance with the manufacturer's recommendations.
- Reattach fuel line to tank and drive the vehicle for several minutes to circulate the additive through the carburetor.
- While engine is still warm, change oil (Refer to page 3-29).
- Clean body, chassis and engine of debris, mud, chaff or grass (Refer to page 3-35).

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

HARDWARE

Periodically, the vehicle should be inspected for loose fasteners. Fasteners should be tightened in accordance with the Torque Specifications table (Ref Fig. 43 on page 3-39).

Use care when tightening fasteners and refer to the Technician's Repair and Service Manual for specific torque values.

Generally, three grades of hardware are used in the vehicle. Grade 5 hardware can be identified by the three marks on the hexagonal head and grade 8 hardware is identified by 6 marks on the head. Unmarked hardware is Grade 2 (Ref Fig. 43 on page 3-39).

ALL TORQUE FIGURES ARE IN FT. LBS. (Nm)										
Unless otherwise noted in text, tighten all hardware in accordance with this chart.										
This chart specifies 'lubricated' torque figures. Fasteners that are plated or lubricated when installed are considered 'wet' and require approximately 80% of the torque required for 'dry' fasteners.										
BOLT SIZE	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Grade 2 	4 (5)	8 (11)	15 (20)	24 (33)	35 (47)	55 (75)	75 (102)	130 (176)	125 (169)	190 (258)
Grade 5 	6 (8)	13 (18)	23 (31)	35 (47)	55 (75)	80 (108)	110 (149)	200 (271)	320 (434)	480 (651)
Grade 8 	6 (8)	18 (24)	35 (47)	55 (75)	80 (108)	110 (149)	170 (230)	280 (380)	460 (624)	680 (922)
BOLT SIZE	M4	M5	M6	M8	M10	M12	M14			
Class 5.8 (Grade 2) 	1 (2)	2 (3)	4 (6)	10 (14)	20 (27)	35 (47)	55 (76.4)			
Class 8.8 (Grade 5) 	2 (3)	4 (6)	7 (10)	18 (24)	35 (47)	61 (83)	97 (131)			
Class 10.9 (Grade 8) 	3 (4)	6 (8)	10 (14)	25 (34)	49 (66)	86 (117)	136 (184)			

Fig. 43 Torque Specifications and Bolt Grades

OPERATION AND SERVICE INFORMATION

Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings

CAPACITIES AND REPLACEMENT PARTS

Fuel Tank / Fuel	6.0 gal (22.5 liters) 87 Octane
Engine Oil	1 1/2 qt (1.4 liters)
Oil Filter	P/N 26591-G01
Air Filter	P/N 28463-G01 Canister Filter
Spark Plugs	NGK BPR5ES (P/N 25523-G4)
	.020 - .030" (.71 - .76 mm) Gap
Starter/Generator Belt	P/N 26414-G01
Clutch Belt	P/N 72328-G01
Rear Axle Oil	40 oz (1.2 liters)
Fuse	15 amp (P/N 18392-G1) ST Sport
	15 amp (P/N 35212-G01) ST 350
Headlight Bulb	P/N 20209-G3
Turn Signal Bulb	#1157 (P/N 21759-G1)
Tail Light Bulb	#1157 (P/N 21759-G1)

Fig. 44 Capacities and Replacement Parts

GENERAL SPECIFICATIONS

ST 350

STANDARD EQUIPMENT:

BATTERY	One 12 Volt Maintenance Free (360 CCA, 51 Minute Reserve)
ENGINE	11 H.P. (8.2 kW) 21 ci (350 cc) Twin Cylinder, Air Cooled, Overhead Cam, Overhead Valve Pressurized Lubrication with Washable, Permanent Oil Filter Internal Balance Shaft Solid State Ignition with RPM Limiter Replaceable Dry Cartridge Air Filter & Remote Intake Fixed Jet Bowl Carburetor, Pulse Fuel Pump
TRANSAXLE	13.32:1 Helical geared with Neutral Lock and Ground Speed Governor
TRANSMISSION.....	Automatic Continuously Variable Transmission (CVT)
FUEL TANK	6 Gallon (23 Liters) Tank. 36 lbs. (16 kg) Fuel Weight
BRAKES	Dual Rear Wheel, Self-Adjusting Mechanical Drum Brakes
PARKING BRAKE.....	Automatic Parking Brake Release with Self-Compensating System
FRONT SUSPENSION	Leaf Springs with Hydraulic Shock Absorbers
REAR SUSPENSION.....	Leaf Springs with Hydraulic Shock Absorbers
STEERING	Single Reduction Rack & Pinion
STEERING WHEEL	Dual Handgrips
SEATING	Cushion Foam/Vinyl Cover, Hip Restraint/Hand Hold
SEATING CAPACITY	Operator & 1 Passenger
TOTAL LOAD CAPACITY	800 lbs. (365 kg) Including Operator, Passenger, Accessories & Cargo 500 lbs. (230 kg) Maximum Bed Load
SPEED	15 mph (24 kph)
CHASSIS	Powder Coated (DuraShield™), Welded Tubular Steel
VEHICLE PROTECTION.....	Tubular Steel Front Bumper with Brush Guards
BODY	Flexible Impact Resistant DuraShield™ Injection Molded TPO (Thermoplastic Olefin) with Base Coat/Clear Coat Front Cowl. DuraShield™ Powder Coated Steel Rear Body
STANDARD COLOR(S).....	ST Series: Hunter Green; ST ADVANTAGE Series: RealTree® Advantage Camo Body and Load Bed
DASH PANEL	Scuff Resistant Glass Fiber Reinforced Plastic (Thermoplastic Olefin) with 4 Drink Holders

LOAD BED	48" (122 cm) W x 40" (102 cm) L x 12" (30 cm) D; 13.3 Cubic feet (.38 m ³); with Full Bed & Tailgate Liner & Electric Dump
LOAD BED FEATURES	Hinged Removable Tailgate, Removable Bed Sides
LIGHTING/HORN (Standard) ..	Dual Halogen Headlights, Horn
TIRES (Standard)	22 x 9 - 10 Stryker I® (Uni-directional)
TIRE PRESSURE.....	12 - 16 psi (85 - 110 kPa)
WEIGHT (Without Fuel)	974 lbs (442 kg)
OPERATING CONTROLS	
& INSTRUMENTATION	Removable Key, 'Deadman' Accelerator Control, Direction Selector, Audible Reverse Warning and Analog Fuel Gauge

OPTIONS/ACCESSORIES:

12 Volt Power Outlet	Steel Doors (Requires Cab)
Ash Tray	Strobe Light (Requires Cab)
Battery Heavy Duty	Vinyl Doors (Requires Cab)
Brake Lights & Taillights	Work Light (Requires Cab)
Flat Bed 40"	Tires 21 x 9 - 10 Work Mate® (Uni-directional)
Flat Bed 48"	@ 12 psi (85 kPa)
Glove Box Locking (Driver & Passenger Side)	Tires 20 x 10 - 10 Turf Saver®
Hour Meter	Tool Box
Light Bar with Beacon and/or Flood Lights	Top (Sun Canopy)
Low Oil Pressure Light	Trailer Hitch
Paint Color (Custom)	Turn Signals
Rear View Mirror (Requires Top)	Weather Protection Enclosure
Receiver, Front & Rear	Winch, Electric
Steel Cab with Wipers (No Doors)	Windshield One-Piece (Top Required) Lexan
Defroster/Cooling Fan (Requires Cab)	Windshield Fold Down (Top Required) Lexan
Dome Light (Requires Cab)	Wheel Covers 8" Black
Electric Heater (Requires Cab)	Wheel Covers 6" Moon
Master Switch Panel (Requires Cab)	Wood Stake Sides
Outside Mirror (Requires Cab)	

Specifications subject to change without notice.

GENERAL SPECIFICATIONS

ST SPORT

STANDARD EQUIPMENT:

BATTERY	One 12 Volt Maintenance Free (360 CCA, 51 Minute Reserve)
ENGINE	11 H.P. (8.2 kW) 21 ci (350 cc) Twin Cylinder, Air Cooled, Overhead Cam, Overhead Valve Pressurized Lubrication with Washable, Permanent Oil Filter Internal Balance Shaft Solid State Ignition with RPM Limiter Replaceable Dry Cartridge Air Filter & Remote Intake Fixed Jet Bowl Carburetor, Pulse Fuel Pump
TRANSAXLE	13.32:1 Helical geared with Neutral Lock and Ground Speed Governor
TRANSMISSION.....	Automatic Continuously Variable Transmission (CVT)
FUEL TANK	6 Gallon (23 Liters) Tank. 36 lbs. (16 kg) Fuel Weight
BRAKES	Dual Rear Wheel, Self-Adjusting Mechanical Drum Brakes
PARKING BRAKE	Automatic Parking Brake Release with Self-Compensating System
FRONT SUSPENSION.....	Leaf Springs with Hydraulic Shock Absorbers
REAR SUSPENSION.....	Leaf Springs with Hydraulic Shock Absorbers
STEERING	Single Reduction Rack & Pinion
STEERING WHEEL	Dual Handgrips
SEATING	Cushion Foam/Vinyl Cover, Hip Restraint/Hand Hold
SEATING CAPACITY	Operator & 1 Passenger
TOTAL LOAD CAPACITY	650 lbs. (395 kg) Including Operator, Passenger, Accessories & Cargo 250 lbs. (113 kg) Maximum Bed Load
SPEED	15 mph (24 kph)
CHASSIS	Powder Coated (DuraShield™), Welded Tubular Steel
VEHICLE PROTECTION.....	Tubular Steel Front Bumper with Brush Guards
BODY	Flexible Impact Resistant DuraShield™ Injection Molded TPO (Thermoplastic Olefin) with Base Coat/Clear Coat Front Cowl. DuraShield™ Powder Coated Steel Rear Body
STANDARD COLOR(S).....	ST Series: Hunter Green; ST ADVANTAGE Series: RealTree® Advantage Camo Body and Load Bed
DASH PANEL	Scuff Resistant Glass Fiber Reinforced Plastic (Thermoplastic Olefin) with 4 Drink Holders

LOAD BED	46" (117 cm) W x 35" (89 cm) L x 10" (25 cm) D; 9.3 Cubic feet (.26 m ³); with Full Bed & Tailgate Liner
LOAD BED FEATURES	Hinged Removable Tailgate, Removable Bed Sides
LIGHTING/HORN (Standard) ..	Dual Halogen Headlights, Horn
TIRES (Standard)	21 x 9 - 10 Work Mate® (Uni-directional)
TIRE PRESSURE	12 psi (85 kPa)
WEIGHT (Without Fuel)	972 lbs (440 kg)
OPERATING CONTROLS	
& INSTRUMENTATION	Removable Key, 'Deadman' Accelerator Control, Direction Selector, Audible Reverse Warning and Analog Fuel Gauge

OPTIONS/ACCESSORIES:

12 Volt Power Outlet	Top (Sun Canopy)
Ash Tray	Trailer Hitch
Battery Heavy Duty	Turn Signals
Brake Lights & Taillights	Weather Protection Enclosure
Flat Bed 40"	Windshield One-Piece (Top Required) Lexan
Flat Bed 48"	Windshield Fold Down (Top Required) Lexan
Glove Box Locking (Driver & Passenger Side)	Wheel Covers 8" Black
Hour Meter	
Paint Color (Custom)	
Rear View Mirror (Requires Top)	
Receiver, Front & Rear	
Tires 22 x 9 - 10 Stryker I® (Uni-directional)	
@ 12 - 16 psi (85 - 110 kPa)	
Tires 20 x 10 - 10 Turf Saver®	

Specifications subject to change without notice.

GENERAL SPECIFICATIONS

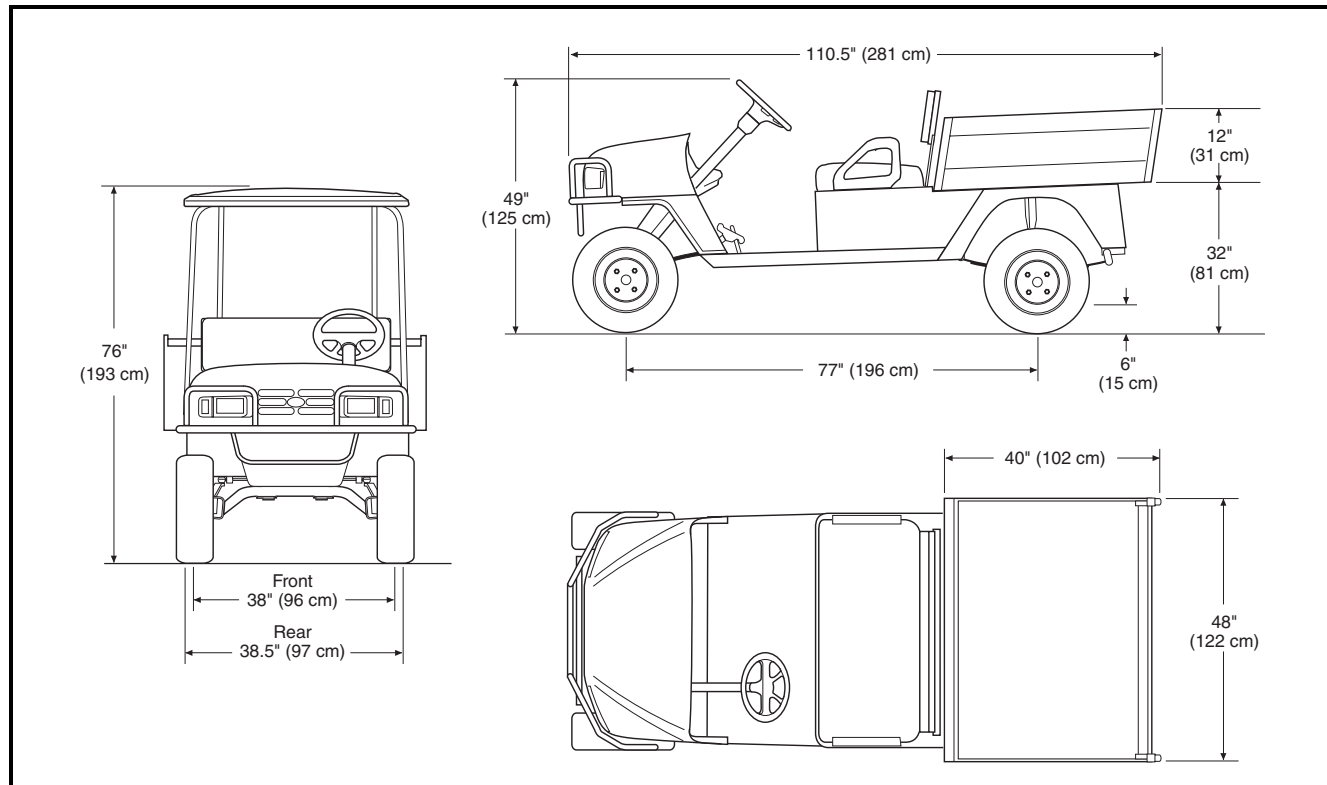


Fig. 1 Vehicle Dimensions for ST 350

GENERAL SPECIFICATIONS

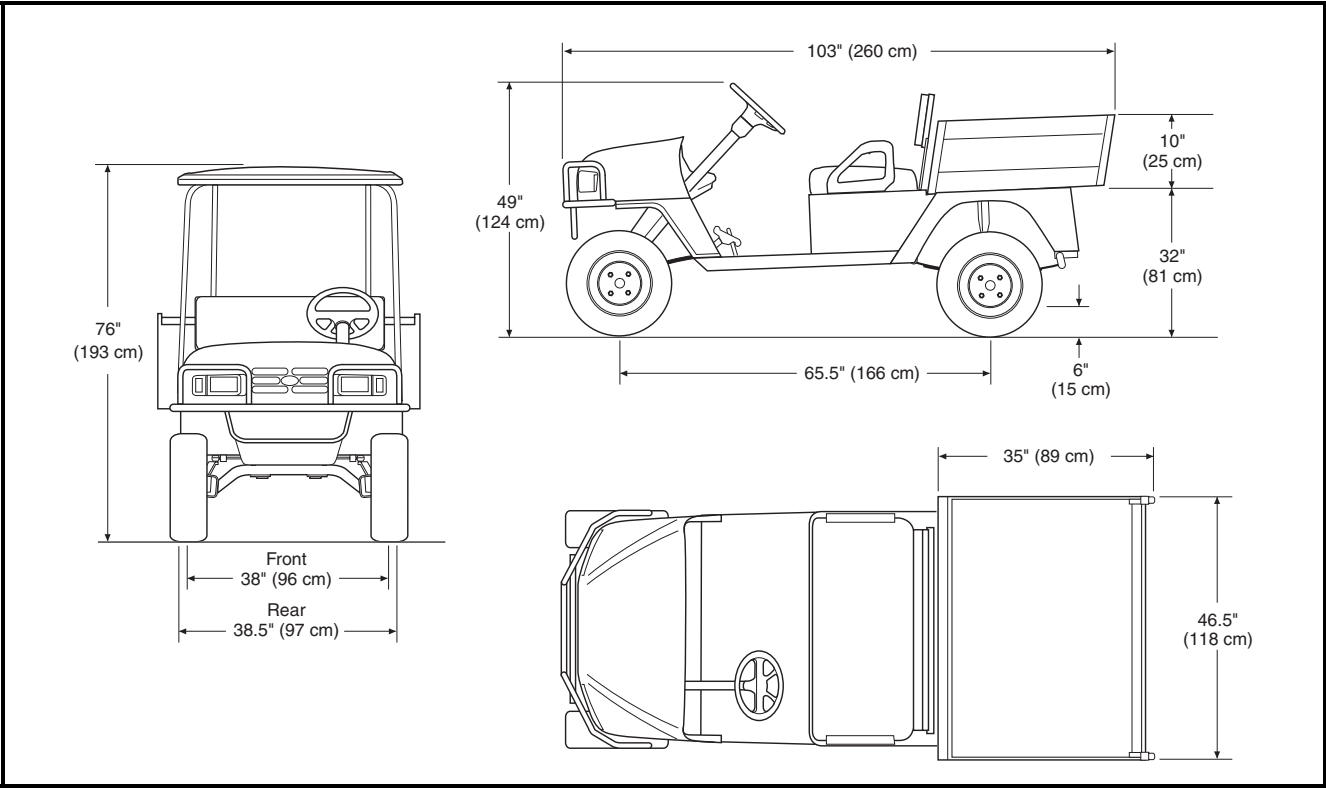


Fig. 2 Vehicle Dimensions for ST Sport

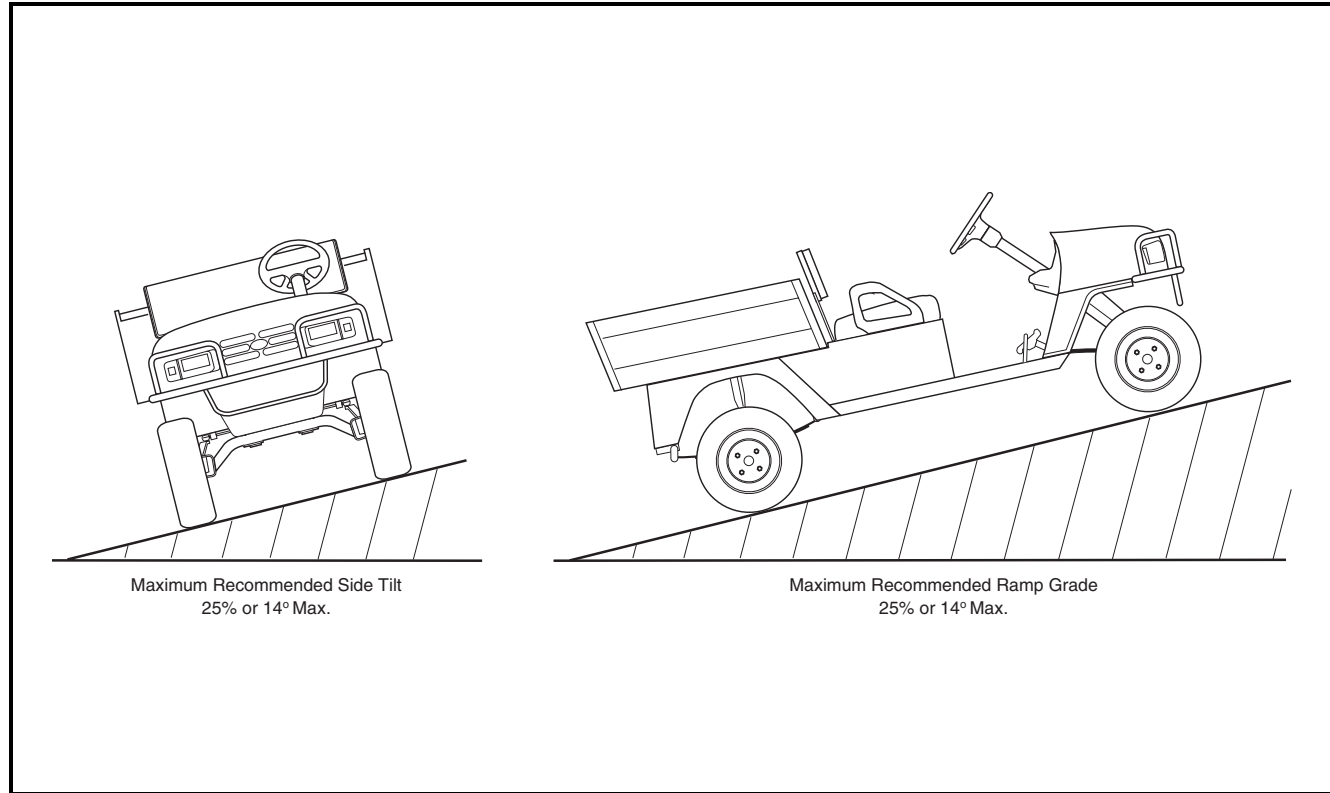


Fig. 3 Vehicle Incline Specifications

GENERAL SPECIFICATIONS

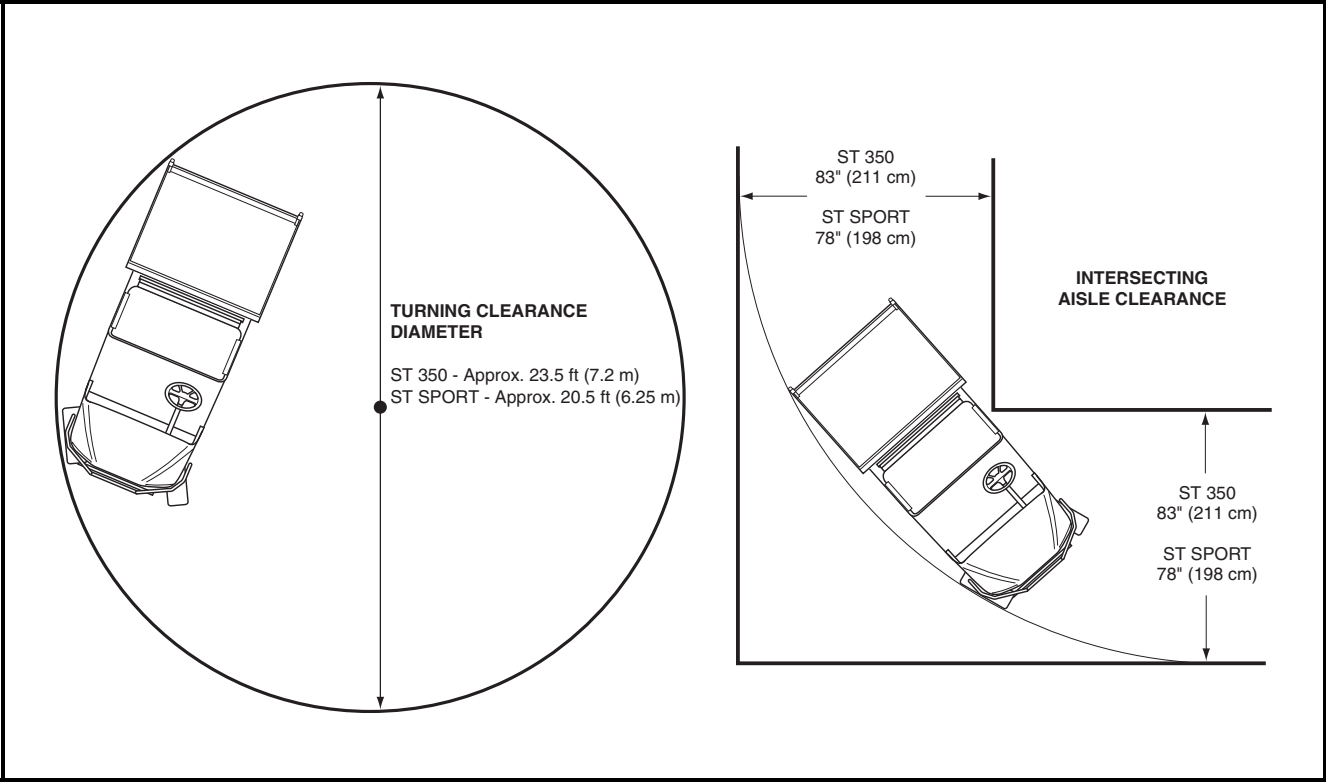


Fig. 4 Vehicle Turning Clearance Diameter and Intersecting Aisle Clearance

FEDERAL EMISSION COMPONENT DEFECT WARRANTY

EMISSION COMPONENT DEFECT WARRANTY COVERAGE - This emission warranty is applicable in all states, except the State of California.

Fuji Heavy Industries Ltd. (herein "FUJI") and TEXTRON Golf, Turf & Specialty Products Augusta, Georgia, (herein "TGT&SP") warrant to the initial retail purchaser and each subsequent owner, that specialty vehicle engine (herein "engine") was designed, built, and equipped to conform at the time of initial sale to all applicable regulations of the U.S. Environmental Protection Agency (EPA), and that the engine is free of defects in materials and workmanship which would cause this engine to fail to conform with EPA regulations during its warranty period.

For the components listed under PARTS COVERED, the dealer or service center authorized by TGT&SP will, at no cost to you, make the necessary diagnosis, repair, or replacement necessary to ensure that the engine complies with applicable U.S. EPA regulations.

EMISSION COMPONENT DEFECT WARRANTY PERIOD

The warranty period for this engine begins on the date of sale to the initial purchaser and continues for a period of 2 years.

PARTS COVERED

Listed below are the parts covered by the Emission Component Defect Warranty. Some of the parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part.

- 1) Fuel Metering System
 - (i) Carburetor and internal parts
 - (ii) Choke System
 - (iii) Fuel filter (annual maintenance item)
- 2) Air Induction System
 - (i) Air filter element (semi-annual maintenance item)
- 3) Ignition System
 - (i) Spark plug (annual maintenance item)
 - (ii) Ignition Coil

- (iii) Ignitor Complete
 - (iv) Pulser Coil
- 4) Exhaust Manifold
- 5) Miscellaneous Items Used in Above Systems
 - (i) Fuel Hoses, clamps and sealing gaskets

OBTAINING WARRANTY SERVICE

To obtain warranty service, take your engine to the nearest authorized TGT&SP distributor or dealer. Bring your sales receipts indicating date of purchase for this engine. The dealer or service center authorized by TGT&SP will perform the necessary repairs or adjustments within a reasonable amount of time and furnish you with a copy of the repair order. All parts and accessories replaced under this warranty become the property of TGT&SP.

WHAT IS NOT COVERED

- Conditions resulting from tampering, misuse, improper adjustment (unless they were made by the dealer or service center authorized by TGT&SP during a warranty repair), alteration, accident, failure to use the recommended fuel and oil, or not performing required maintenance services.
- The replacement parts used for required maintenance services.
- Consequential damages such as loss of time, inconvenience, loss of use of the engine of equipment, etc.
- Diagnosis and inspection charges that do not result in warranty-eligible service being performed.
- Any non-authorized replacement part, or malfunction of authorized parts due to use of non-authorized parts.

OWNER'S WARRANTY RESPONSIBILITIES:

As the engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. TGT&SP recommends that you retain all receipts covering maintenance on your engine, but TGT&SP cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the engine owner, you should, however, be aware that TGT&SP may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

LIMITED WARRANTY

You are responsible for presenting your engine to a dealer, distributor or warranty station authorized by TGT&SP when a problem exists.

If you have any questions regarding your warranty rights and responsibilities, you should contact the TGT&SP Warranty Department at 1-800-241-5855 for the information.

THINGS YOU SHOULD KNOW ABOUT THE EMISSION CONTROL SYSTEM WARRANTY

MAINTENANCE AND REPAIRS

You are responsible for the proper use and maintenance of the engine. You should keep all receipts and maintenance records covering the performance of maintenance records should be transferred to each subsequent owner of the engine. TGT&SP reserves the rights to deny warranty coverage if the engine has not been properly maintained. Warranty claims will not be denied, however, solely because of the lack of required maintenance or failure to keep maintenance records.

MAINTENANCE, REPLACEMENT OR REPAIR OF EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY REPAIR ESTABLISHMENT OF INDIVIDUAL; HOWEVER, WARRANTY REPAIRS MUST BE PERFORMED BY A DEALER OR SERVICE CENTER AUTHORIZED BY TGT&SP. THE USE OF PARTS THAT ARE NOT EQUIVALENT IN PERFORMANCE AND DURABILITY TO AUTHORIZED PARTS MAY IMPAIR THE EFFECTIVENESS OF THE EMISSION CONTROL SYSTEM AND MAY HAVE A BEARING ON THE OUTCOME OF A WARRANTY CLAIM.

If other than the parts authorized by TGT&SP are used for maintenance replacements or for the repair of components affecting emission control, you should assure yourself that such parts are warranted by their manufacturer to be equivalent to the parts authorized by TGT&SP in their performance and durability.

HOW TO MAKE A CLAIM

All repairs qualifying under this limited warranty must be performed by a dealer or service center authorized by TGT&SP. In the event that any emission-related parts is found to be defective during the warranty period, you shall notify

TGT&SP Warranty Department at 1-800-241-5855 and you will be given the appropriate warranty service facilities where the warranty repair can be performed.

CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and Fuji Heavy Industries Ltd. (herein "FUJI") are pleased to explain the emission control system warranty on your 2000 and later small off-road engine (herein "engine"). In California, the engine must be designed, built and equipped to meet the State's stringent anti-smog standards. FUJI must warrant the emission control system on your engine for the period of time described below, provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the carburetor and the ignition system. Also included may be hoses, connectors and other emission-related assemblies.

Where a warrantable condition exists, FUJI will repair your engine at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:

The 2000 and later engines are warranted for two (2) years. If any emission related part on your engine is defective, the part will be repaired or replaced by FUJI.

OWNER'S WARRANTY RESPONSIBILITIES:

As the engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. FUJI recommends that you retain all receipts covering maintenance on your engine, but FUJI cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the engine owner, you should, however, be aware that FUJI may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your engine to a dealer, distributor or warranty station authorized by TEXTRON Golf, Turf & Specialty Products Augusta, Georgia, (herein "TGT&SP") to which FUJI supplies

the engine as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact the TGT&SP Warranty Department at 1-800-241-5855.

LIMITED WARRANTY

On Emission Control Systems - California Only -

FUJI, Tokyo, Japan, warrants to the owner of the 2000 and later engine that the engine (1) has been designed, built and equipped so as to conform at the time of manufacture with the applicable regulations of the California Air Resources Board, and (2) is free from defects in materials and workmanship which could cause it to fail to conform with those regulations as may be applicable in the terms and conditions stated below.

A. WARRANTY COMMENCEMENT DATE

The warranty period begins on the date the engine is delivered to a first retail purchaser.

B. LENGTH OF COVERAGE

FUJI warrants to a first retail purchaser and each subsequent purchaser that the engine is free from defects in materials and workmanship which could cause the failure of a warranted emission-related part for a period of two (2) years after the date of delivery to the first retail purchaser.

C. WHAT IS COVERED:

1. REPAIR OR REPLACEMENT PARTS

Repairs and replacement of any warranted part will be performed at no charge to you by an authorized dealer, distributor or a warranty station. You may contact the TGT&SP Warranty Department at 1-800-241-5855 to get the nearest appropriate location where your warranty repairs are performed.

LIMITED WARRANTY

2. WARRANTY PERIOD

This warranty continues for a period of two (2) years and shall apply only to the repair, replacement or adjustment of the component parts which are not scheduled for replacement as required maintenance. Further, component parts which are scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for the warranty period. Any warranted part which is scheduled for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement point for that part.

3. DIAGNOSIS

You shall not be charged for diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed at an authorized dealer, distributor or warranty station.

4. CONSEQUENTIAL DAMAGES

If a warranted part failed causing damages to other engine components, consult a warranty station.

D. WHAT IS NOT COVERED

1. This limited warranty does not cover any part which malfunctions, fails or is damaged due to failure to follow the maintenance and operating instructions set forth in the 2000 and later Owner's Manual including:

- (1) improper or inadequate scheduled engine inspection and maintenance
- (2) improper or inadequate maintenance of any warranted parts
- (3) improper installation, adjustment or repair of the engine or of any warranted part unless performed by an authorized dealer
- (4) failure to follow recommendations on fuel use contained in the 2000 and later Owner's Manual
- (5) repairs performed outside of the authorized warranty service facilities

- (6) use of parts which are not authorized by FUJI.

2. Add-on or modified parts

This warranty does not cover any part which malfunctions, fails or is damaged due to alterations by changing, adding to or removing parts from the engine.

3. Expenses incurred by processing warranty claims

FUJI, any authorized dealer, distributors and warranty station shall not be liable for any loss of use of the engine, for any alternative usage, for any damage to goods, loss of time or inconvenience.

E. HOW TO FILE A CLAIM

All repairs qualifying under this Limited Warranty must be performed by a dealer who sold you the engine or distributors or warranty stations authorized by TGT&SP. In the event that any emission-related part is found to be defective during the warranty period, you should notify TGT&SP Warranty Department at 1-800-241-5855 and you will be given the appropriate warranty service facilities where the warranty repair is performed.

F. WHERE TO GET WARRANTY SERVICE

It is recommended that warranty service be performed by the authorized dealer who sold you the engine, although warranty service will be performed by any authorized dealers, distributors and warranty stations anywhere in the United States. When warranty repair is needed, the engine must be brought to an authorized dealer, distributorship or warranty station's place of business during normal business hours. In all cases, a reasonable time, not to exceed 30 days, must be allowed for the warranty repair to be completed after the engine is received by the authorized dealer, distributor or service station.

G. MAINTENANCE, REPLACEMENT AND REPAIR OF EMISSION-RELATED PARTS

Only warranted engine replacement parts approved by FUJI should be used in the performance of any warranty maintenance or repairs on emission-related parts. If other than authorized parts are used for maintenance, replacement or repair of components affecting emission con-

trol, you should assure yourself that such parts are warranted by their manufacturer to be equivalent to authorized parts in performance and durability. FUJI, however, assumes no liability under this warranty with respect to parts other than authorized parts. The use of non-authorized replacement parts does not invalidate the warranty on other components unless the non-authorized parts cause damage to warranted parts.

H. PARTS COVERED UNDER THE CALIFORNIA EMISSIONS WARRANTY

- (1) Fuel Metering System
 - (i) Carburetor and internal parts
 - (ii) Choke System
 - (iii) Fuel filter (annual maintenance item)
- (2) Air Induction System
 - (i) Air filter element (semi-annual maintenance item)
- (3) Ignition System
 - (i) Spark plug (annual maintenance item)
 - (ii) Ignition Coil
 - (iii) Ignitor Complete
 - (iv) Pulser Coil
- (4) Exhaust Manifold
- (5) Miscellaneous Items Used in Above Systems
 - (i) Fuel hoses, clamps and sealing gaskets

I. MAINTENANCE STATEMENTS

It is your responsibility to have all scheduled inspection and maintenance services performed at the times recommended in the 2000 and later Owner's Manual and to retain proof that inspection and maintenance services are performed at the times when recommended. FUJI will not deny a warranty claim solely because you have no record of maintenance; however, FUJI may deny a warranty claim if your failure to perform required maintenance resulted in the failure of warranted part. The proof which you maintain should be given to each subsequent owner of the engine. You are responsible for performing the scheduled maintenance described in the Periodic Service Schedule of this manual. The scheduled maintenance is based on the normal engine operating schedule.

LIMITED WARRANTY _____

Notes: _____

DECLARATION OF CONFORMITY

**EC Declaration of Conformity • Déclaration de Conformité CE •
EG Conformiteits-Declaratie • EG-Konformitätsbescheinigung •**

Certificato di Conformità CE • EF Konformitätserklärung •

EU Upptyllandecertifikat • Ilmoitus yhdenmukaisuudesta eyn sääntöjen kanssa •

Declaração de Conformidad de la CE • Declaração de Conformidade da CE

We the undersigned • Nous, soussignés • Wij, ondergetekenden • Wir, die Unterzeichnenden • Noi sottoscritti Underlegredo •
Underskriftna • We allegetuutaret • Los abajo firmantes • NOS, abaixo assinados

**Ransomes Jacobsen Limited
West Road, Ransomes Europark,
Ipswich, England, IP3 9TT**

Declare that the machine Described Below • Certifions que la machine suivante • verklaren dat onderstaand beschreven machine •
erklaren, dass die nachfolgend beschriebene Maschine • Dichiariamo che la macchina descritta di seguito • Erklærer, at følgende maskine •
Deklarerar att den maskin som beskrivs nedan • valvisamme, että alla kuvattu kone • Certificamos que la máquina descrita abajo •
declaramos que a máquina a seguir descrita

Make & Type • Nom & Type • Merk & Type • Marke und Typ • Marca e tipo •

Fabrikat og type • Fabrikat & typ • Malli ja tyyppi • Marca y Tipo • Marca & Tipo •

E-Z-GO
MPT800-G, MPT800-LP, MPT800-E
MPT1000-G, MPT1000-LP, MPT1000-E
MPT1200-G, MPT1200-LP, MPT1200-E
ST350-G, ST350-LP
ST480-G, ST480-LP
ST4&4-G

Category • Modèle • Categoria • Kategorie • Kategori • Luokka •

Category • Categoria •

Series • Série • Sajla •

Off Road Utility Truck

2100000 & above

Complies with the provisions of the following European directives and amendments and the regulations transposing it into national law •
Europese Richtlijnen en Amendementen, alsmede aan de verordeningen die deze omzetten in nationale wetgeving • den Bestimmungen der
folgenden Europa-Richtlinien einschließlich aller Änderungen und Ergänzungen sowie den Vorschriften, die diese in das nationale Recht
umsetzen, entspricht • soddisfa quanto previsto dalle seguenti direttive ed emendamenti europei e dalle normative che li riportano in legge
nazionale • Overholder bestemmelserne i følgende EF-direktiver med ændringer og i de forordninger, hvorved de omsættes til national lov •
Upptyller kraven i følgende europeiske direktiv med tillegg og regler transponerte til den nasjonale lovgivning • täyttää seuraavana mainittujen
Euroopan direktiivien ja muutosten ja säännösten asettamat edellyt

Machinery Safety Directive • Directive de sécurité des machines • Richtlijn Machineveiligheid • Richtlinie zur Maschinensicherheit •
Direttiva sulla sicurezza del macchinario • Maskinsikkerhedsdirektivet • Maskinsäkerhetsdirektiv • Koneen turvallisuutta koskeva direktiivi •
Directiva de seguridad de maquinaria • Directiva de segurança de máquinas •

EMC Directive • Directive de compatibilité électromagnétique • EMC Richtlijn •
EMK-Richtlinie • Direttiva EMC • EMC-direktivet • Elektromagnetisk kompatibilitetsdirektiv •
EMC-direktivi • Directiva EMC •

Battery & Accumulator Directive • Directive de pile et Accumulateur • Batterij en Opspanelaar Richtlijn • Batterie und Speicherdirective •
La Direttiva di batteria ed Accumulator • Directiva de bateria y Acumulador •

Keeper of Technical File, Place & Date of Declaration • Lieu & Date de déclaration • Plaats & datum verklaringssaflegging • Ort und Datum
dieser Erklärung • Luogo e data della dichiarazione • Sied og dato for erklæringen • Pils & datum for deklaration • Lausummon paikka ja
päivämäärä • Lugar y fecha de la declaración • Local e data da declaração

Mangalng Director, Jacobsen International
Ransomes Jacobsen Limited
West Road, Ransomes Europark,
Ipswich, England, IP3 9TT

01.10.2004

S. Chiklen

S. Chiklen
Mangalng Director, Jacobsen International

Certificate Number • Numéro du certificat • Certificatnummer • Zertifikat Nummer •
Número de certificado • Certificado •

ORUT 2100000(Rev0)

GB English FR French NL Dutch DE German IT Italian DK Danish SE Swedish FI Finnish ES Spanish PT Portuguese

DECLARATION OF CONFORMITY

Notes:

LABELS AND PICTOGRAMS

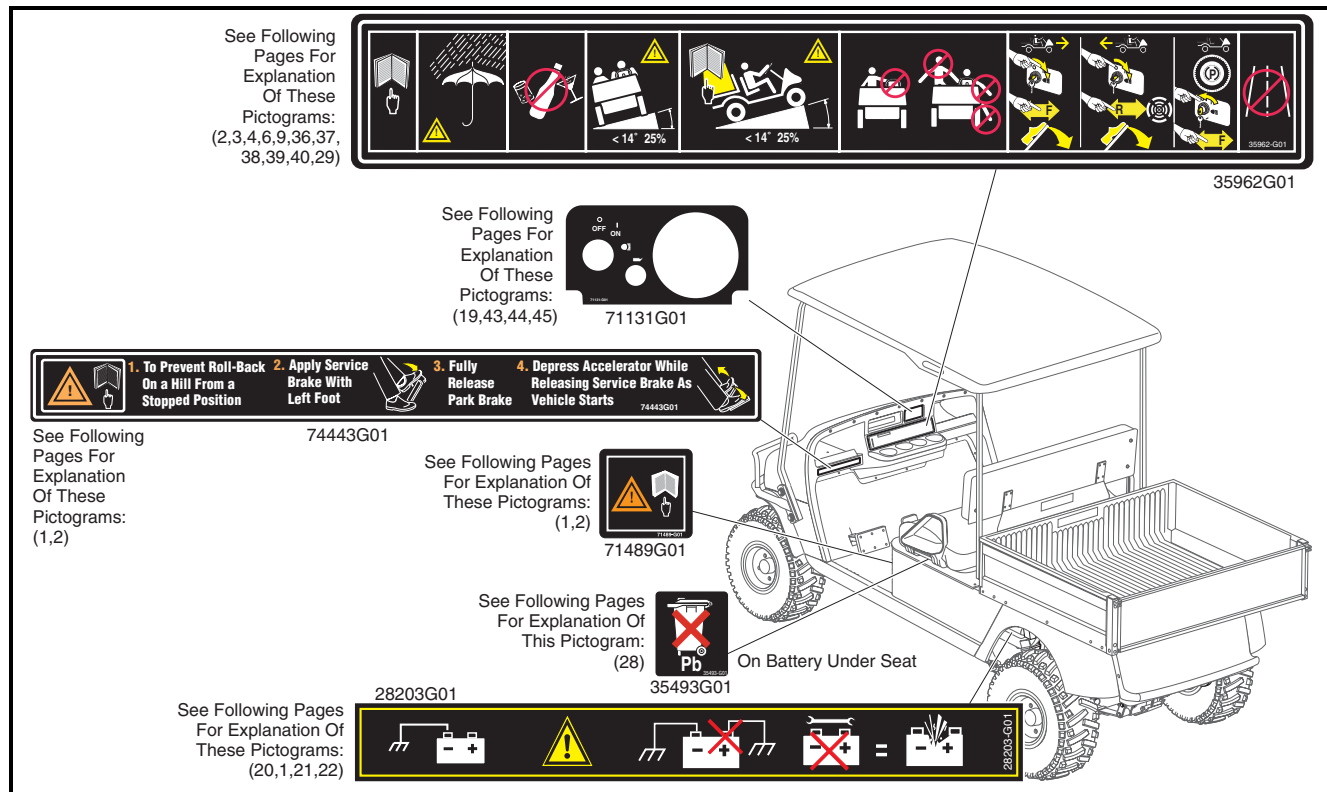


Fig. 1 Label Locations



LABELS AND PICTOGRAMS

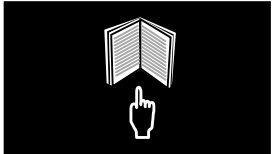
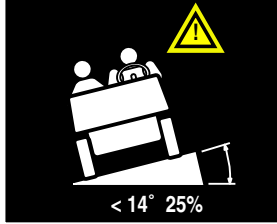
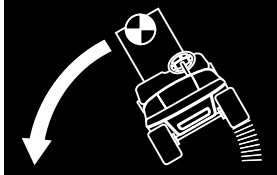
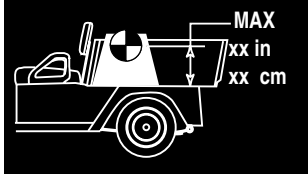
1.		WARNING	5.		MAXIMUM CROSS HILL/RAMP ANGLE AS SPECIFIED
2.		READ MANUAL	6.		WARNING MAXIMUM CROSS HILL/RAMP ANGLE AS SPECIFIED
3.		WARNING USE CAUTION IN INCLEMENT WEATHER	7.		LOAD WITH HIGH CENTER OF GRAVITY COULD RESULT IN TIP OVER
4.		WARNING DO NOT OPERATE IF USING ALCOHOL OR DRUGS	8.		LOAD CENTER OF GRAVITY, MAXIMUM HEIGHT

Fig. 3 Pictogram Definitions

LABELS AND PICTOGRAMS

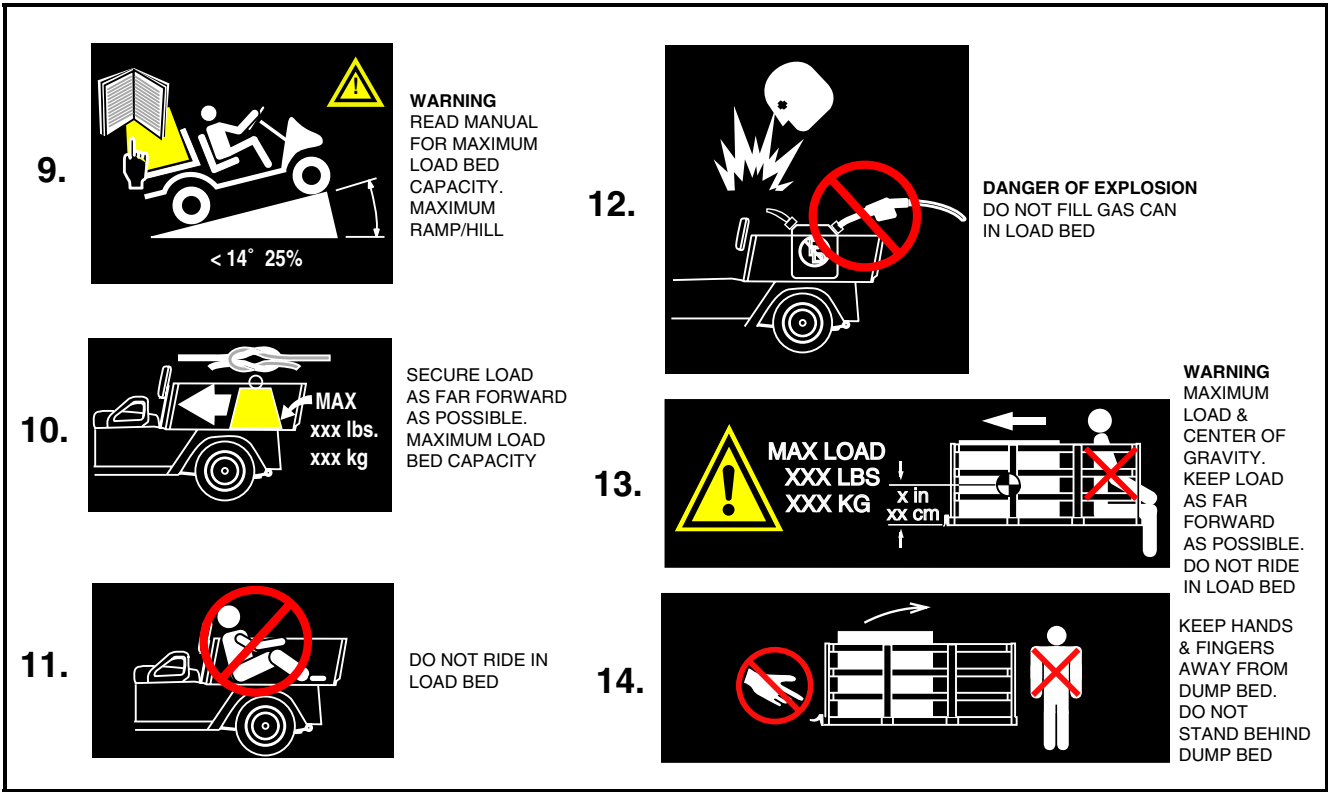


Fig. 4 Pictogram Definitions (Continued)

LABELS AND PICTOGRAMS

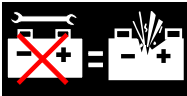
15.		CLEAN UP GASOLINE SPILLS WITH WATER BEFORE STARTING ENGINE
16.		UNLEADED GASOLINE
17.		DO NOT SPILL FUEL ON A HOT ENGINE
18.		GROUND FUEL PUMP
19.		LOW OIL PRESSURE
20.		NEGATIVE GROUND BATTERY
21.		DO NOT CONNECT POSITIVE BATTERY TERMINAL TO GROUND
22.		SHORTING BATTERY TERMINALS MAY CAUSE EXPLOSION
23.		NO TAMPERING. KEEP HANDS OUT
24.		WARNING CORROSIVE
25.		WARNING EXPLOSIVE
26.		WARNING LETHAL VOLTAGE
27.		DO NOT EXPOSE TO FLAME

Fig. 5 Pictogram Definitions (Continued)

LABELS AND PICTOGRAMS

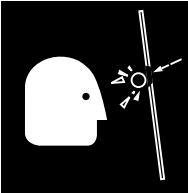
28.		DO NOT DISPOSE OF BATTERIES IN LANDFILL	33.		WEAR EYE PROTECTION
29.		DO NOT DRIVE ON HIGHWAY	34.		NO SMOKING
30.		WINDSHIELDS DO NOT PROVIDE PROTECTION FROM FLYING OBJECTS	35.		HOT SURFACE
31.		BATTERIES ARE HEAVY. USE CARE LIFTING	36.		OPERATE FROM DRIVERS SIDE ONLY
32.		USE INSULATED TOOLS			

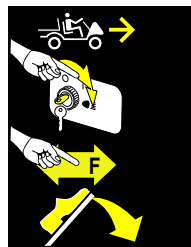
Fig. 6 Pictogram Definitions (Continued)

37.



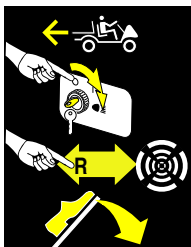
KEEP ARMS
AND LEGS
WITHIN VEHICLE

38.



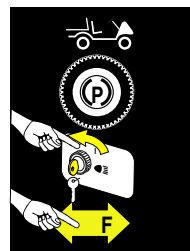
TO OPERATE VEHICLE IN FORWARD:
* TURN KEY TO ON
* MOVE DIRECTION SELECTOR TO
FORWARD
* DEPRESS ACCELERATOR PEDAL
AND ACCELERATE SMOOTHLY

39.



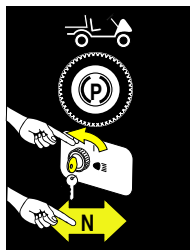
TO OPERATE VEHICLE IN REVERSE:
* TURN KEY TO ON
* MOVE DIRECTION SELECTOR TO
REVERSE
* AN AUDIBLE DEVICE WILL SOUND
* DEPRESS ACCELERATOR PEDAL
AND ACCELERATE SMOOTHLY

40.



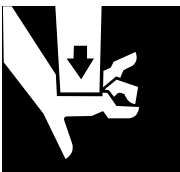
TO LEAVE A GASOLINE POWERED
VEHICLE IN PARK:
* APPLY PARKING BRAKE
* TURN KEY TO OFF
* MOVE DIRECTION SELECTOR TO
FORWARD

41.



TO LEAVE AN ELECTRIC POWERED
VEHICLE IN PARK:
* APPLY PARKING BRAKE
* TURN KEY TO OFF
* MOVE DIRECTION SELECTOR TO
NEUTRAL

42.



KEEP CLEAR
HAND OR
FINGERS CAN
BE TRAPPED

Fig. 7 Pictogram Definitions (Continued)

LABELS AND PICTOGRAMS

43.



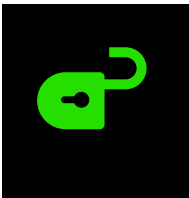
ON
POSITION
44.



OFF
POSITION
45.



HEADLIGHTS
46.

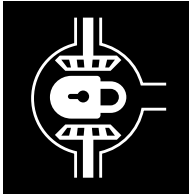


UNLOCKED
47.



LOCKED

48.



DIFFERENTIAL
LOCKED
49.



WARNING
KEEP ENTIRE BODY
INSIDE CAR

Fig. 8 Pictogram Definitions (Continued)

28614-G03-GB
ISSUED: 07/2002



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P.O. Box 388 Augusta, Georgia 30903-0388 USA
Inside USA Phone: 1-800-241-5855, FAX: 1-800-448-8124
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